

S/M No. :

# Service Manual

## Microwave Oven

Model: KOC-1C0KB

KOC-1C0KBS

KOC-1C4KB

### ✓ Caution

: In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center (<http://svc.dwe.co.kr>).

**DAEWOO**   
ELECTRONICS

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# PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

- (a) Do not operate or allow the oven to be operated with the door open.
- (b) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs if necessary: (1) Interlock operation, (2) Proper door closing, (3) Seal and sealing surfaces (arcing, wear, and other damage), (4) Damage to or loosening of hinges and latches (5) Evidence of dropping or abuse.
- (c) Before turning on power to the microwave oven for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.
- (d) Any defective or misadjusted components in the interlock, monitor, door seal and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.

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# 1. SAFETY AND PRECAUTIONS

## 1. FOR SAFE OPERATION

Damage that allows the microwave energy (that cooks or heats the food) to escape will result in poor cooking and may cause serious bodily injury to the operator.

IF ANY OF THE FOLLOWING CONDITIONS EXIST, OPERATOR MUST NOT USE THE APPLIANCE.

(Only a trained service personnel should make repairs.)

- (1) A broken door hinge.
- (2) A broken door viewing screen.
- (3) A broken front panel, oven cavity.
- (4) A loosened door lock.
- (5) A broken door lock.

The door gasket plate and oven cavity surface should be kept clean.

No grease, soil or spatter should be allowed to build up on these surfaces or inside the oven.

DO NOT ATTEMPT TO OPERATE THIS APPLIANCE WITH THE DOOR OPEN.

The microwave oven has concealed switches to make sure the power is turned off when the door is opened.

Do not attempt to defeat them.

DO NOT ATTEMPT TO SERVICE THIS APPLIANCE UNTIL YOU HAVE READ THIS SERVICE MANUAL.

## 2. FOR SAFE SERVICE PROCEDURES.

1. If the oven is operative prior to servicing, a microwave emission check should be performed prior to servicing the oven.
2. If any certified oven unit is found to servicing, a microwave emission check should be performed prior to servicing the oven.
  - (1) inform the manufacturer, importer or assembler,
  - (2) repair the unit at no cost to the owner,
  - (3) attempt to ascertain the cause of the excessive leakage,
  - (4) tell the owner of the unit not to use the unit until the oven has been brought into compliance.
3. If the oven operates with the door open, the service person should tell the user not to operate the oven and contact the manufacturer immediately.

## IMPORTANT

The wire in this mains lead coloured in accordance with the following code.

Green-and-yellow	: Earth
Blue	: Neutral
Brown	: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter 'E', earth symbol or coloured green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter 'N' or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter 'L' or coloured red.

**NOTE :** This oven is designed for counter-top use only.

## 2. SPECIFICATIONS

MODEL		KOC-1C0KB / KOC-1C0KBS / KOC-1C4KB
POWER SUPPLY		230V~50Hz, SINGLE PHASE WITH earthing
POWER CONSUMPTION	MICROWAVE	1450W
	GRILL	1250W
	CONVECTION	2650W
	COMBINATION	2750W, MAX 2900W
MICROWAVE ENERGY OUTPUT		800W (IEC705)
MICROWAVE FREQUENCY		2450MHz
OUTSIDE DIMENSIONS (W X H X D)		524X375X477mm(20.63X14.76X18.78in)
CAVITY DIMENSIONS (W X H X D)		400x233x365mm(15.75x9.17x14.37in)
NET WEIGHT		Approx. 25kg(55.06 lbs)
FUNCTION SELECTIONS		MICROWAVE/ GRILL/ CONVECTION/ COMBINATION
POWER SELECTIONS		10 LEVELS
CAVITY VOLUME		1.3 Cu.Ft (34 ℓ )

*\* Specifications are subject to change without notice.*

## 3. INSTALLATION

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### 1. Steady, flat location

This microwave oven should be set on a steady, flat surface.  
This microwave oven is designed for counter top use only.

### 2. Leave space behind and side

All air vents should be kept a clearance. If all vents are covered during operation, the oven may overheat and, eventually, cause failure.

### 3. Away from Radio and TV sets

Poor television reception and radio interference may result if the oven is located close to a TV, Radio, antenna or feeder and so on.  
Position the oven as far from them as possible.

### 4. Away from heating appliances and water taps

Keep the oven away from hot air, steam or splash when choosing a place to position it, or the insulation might be adversely affected and breakdowns occur.

### 5. Power supply

- Check your local power source. This microwave oven requires a current of approximately 15 amperes, 230V, 50Hz.
- Power supply cord is about 1.5 meters long.
- The voltage used must be the same as specified on this oven. Using a higher voltage may result in a fire or other accident causing oven damage. Using low voltage will cause slow cooking. We are not responsible for damage resulting from use of this oven with a voltage of ampere fuse other than those specified.
- This appliance is supplied with cable of special type, which, if damaged, must be repaired with cable of same type.
- Such a cable can be purchased from DAEWOO and must be installed by a Qualified Person.

### 6. Examine the oven after unpacking for any damage such as:

A misaligned door, broken door or a dent in cavity.  
If any of the above are visible, DO NOT INSTALL, and notify dealer immediately.

### 7. Do not operate the oven if it is colder than room temperature.

(This may occur during delivery in cold weather.) Allow the oven to become room temperature before operating.

## EARTHING INSTRUCTIONS

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This appliance must be earthed. In the event of an electrical short circuit, earthing reduces the risk of the electric shock by providing an escape wire for the electric current. This appliance is equipped with a cord having a earthing wire with a earthing plug. The plug must be plugged into an outlet that is properly installed and earthed.

### WARNING

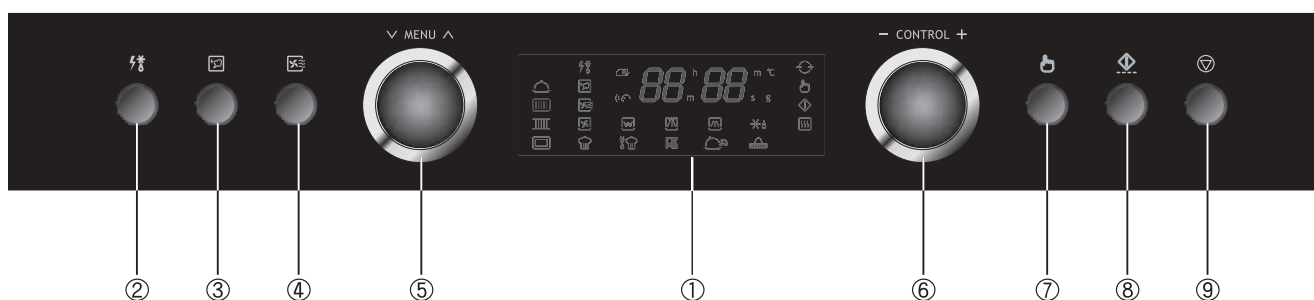
Improper use of the earthing plug can result in a risk of electric shock.

Consult a qualified electrician or serviceman if the earthing instructions are not completely understood, or if doubt exists as to whether the appliance is properly earthed, and either:

If it is necessary to use an extension cord, use only a 3-wire extension cord that has a 3-blade earthing plug, and a 3-slot receptacle that will accept the plug on the appliance.

The marked rating of the extension cord should be equal to or greater than the electrical rating of the appliance, or  
Do not use an extension cord.

## 4. CONTROL PANEL



### ① Display

The display shows you some information such as cooking time, menu, quantity and temperature and so on.

### ② Quick defrost( ⚡ ) Button

You can defrost a 500 grams of food quickly and easily.

### ③ Steam cleaning( ☁ ) Button

This function helps you to clean the inside of oven.

### ④ Deodorization( ☒ ) Button

The oven has a special function to blow off smells in the oven.

### ⑤ Menu Dial Knob :

You can choose a cooking menu by turning the **Menu Dial** knob.

### ⑥ Control Dial Knob ( ⤵⤴ ) :

You can enter cooking time, quantity, weight, and temperature by turning the **Control Dial** knob.

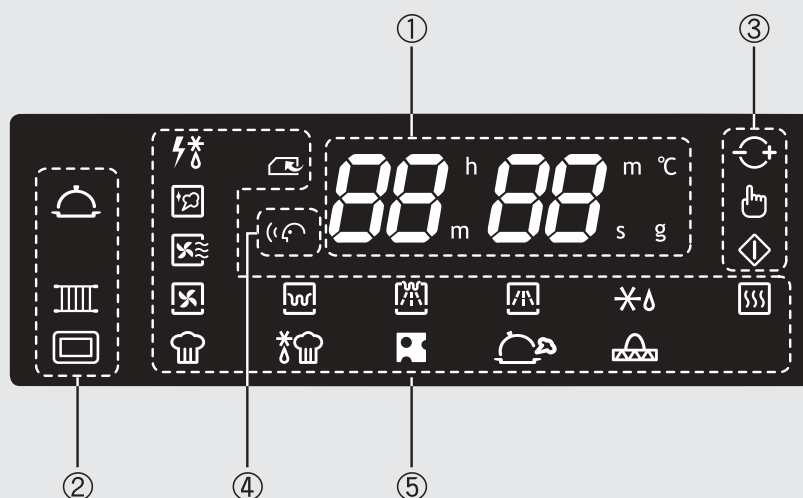
### ⑦ Selection( 👉 ) Button: You can confirm the contents you entered by pressing the **Selection** button.

### ⑧ Start/Speedy Cook ( ⬆ ) Button:

- You can start cooking immediately by pressing the **Start** button after entering cooking information such as cooking time, power level and so on.
- You can start the **Microwave** cook at power level 10 quickly by pressing the **Start** button.  
You can add 30 seconds to the cooking time up to 5 minutes each time the **Start** button is pressed.

### ⑨ Stop/Clear( ⏹ ) Button:

It is used for stopping the oven operation or clearing the display.



### ① Display window

The display shows you some cooking information such as cooking time, clock, temperature, quantity and so on.

### ② Icons of cookware

: It means a Steam bowl. If lights in the display, use a steam bowl for cooking. (This is optional feature.)

: It means a Grill rack. If lights in the display, use a grill rack for cooking.

: It means a Metal tray. If lights in the display, use a metal tray for cooking.

### ③ Icons of operation guide

: It means the Control dial knob. If blinks, turn the control dial knob.

: It means the Selection button. If blinks, press the selection button.

: It means the Start button. If blinks, press the start/speedy cook button.

### ④ Icons of voice guide function

: It means the Voice guide function. If the voice guide function is activated, turns on in the display. (Refer to "Setting the volume level" on the page 9.)

### ⑤ Icons of cooking menu

: It means Quick defrost. lights in the display during Quick defrosting.

: It means Steam cleaning. lights in the display during Steam cleaning.

: It means Deodorization. lights in the display during Deodorization.

: It means Convection cook. lights in the display during Convection cooking.

: It means Grill cook. lights in the display during Grill cooking.

: It means Combination cook. lights in the display during Combination cooking.

: It means Microwave cook. lights in the display during Microwave cooking.

: It means Auto defrost. lights in the display during Auto defrosting.

: It means Auto cook. lights in the display during Auto cook.

: It means Instant cook. lights in the display during Instant cook.

: It means Fermentation. lights in the display during Fermentation.

: It means Steam cook. lights in the display during Steam cook. This is optional feature.

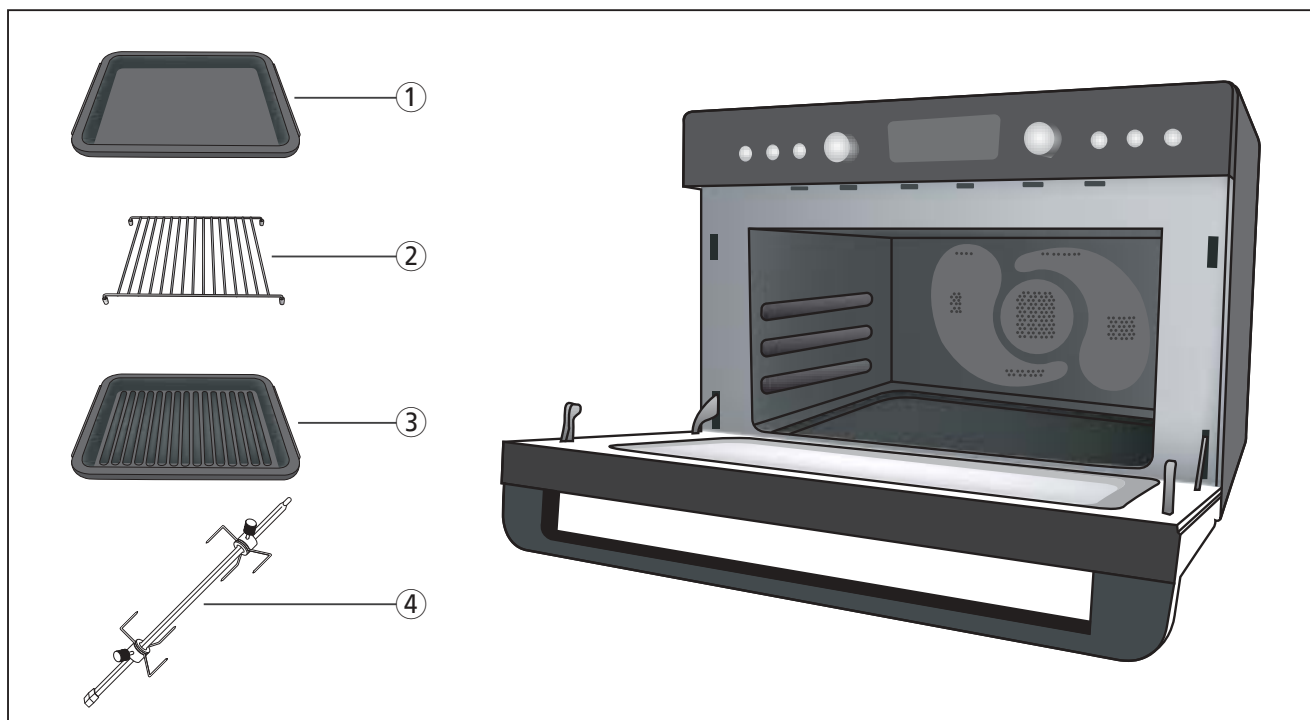
: It means Mexican cook. lights in the display during Mexican cook. This is optional feature.

: It means Memory cook. lights in the display during Memory cook.

: It means Preheating. lights in the display during preheating in Convection cooking.

## 6. ACCESSORIES

This oven is equipped with several accessories. They can be used in various ways to facilitate cooking.



① **Metal Tray** - Put food or proper cookware on the metal tray.

**NOTE :** Metal Tray is attached to the left cushion.

② **Grill Rack** - Put the grill rack on the metal tray.  
It should be always used with the metal tray for cooking.

③ **Grill Tray** - Put food or proper cookware on the grill tray

**NOTE :** Grill Tray is attached to the right cushion.

④ **Rotisserie** - It can be used in Auto cook menu 3  
(Please, refer to the next page about using of rotisserie)

### ■ HOW TO USE THE ACCESSORIES OF COOKING

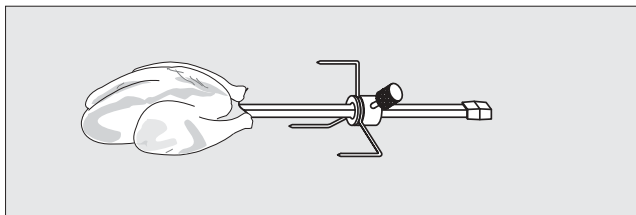
■ Metal Tray	■ Grill Rack	■ Grill Tray	■ Rotisserie
 <ul style="list-style-type: none"> <li>• Microwave cooking</li> <li>• Auto defrosting</li> <li>• Quick defrosting</li> <li>• Fermentation</li> <li>• Memory cooking</li> <li>• Convection cooking</li> <li>• Auto cook menu: 3, 5</li> <li>• Instant cook menu: 1, 5</li> </ul>	 <ul style="list-style-type: none"> <li>• Put the grill rack on the metal tray.</li> <li>• It should be always used with the metal tray for cooking.</li> <li>• Auto cook menu: 1, 2, 4, 6</li> <li>• Instant cook menu: 2, 3, 4</li> </ul>	 <ul style="list-style-type: none"> <li>• Grill cooking</li> </ul>	 <ul style="list-style-type: none"> <li>• Auto cook menu: 3</li> </ul>



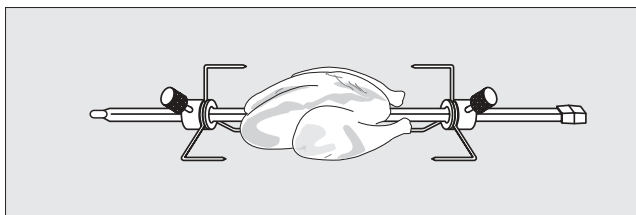
## 7. INTERLOCK MECHANISM AND ADJUSTMENT

### ■ HOW TO USE THE ACCESSORIES OF COOKING

- ① Insert Chicken into rotisserie



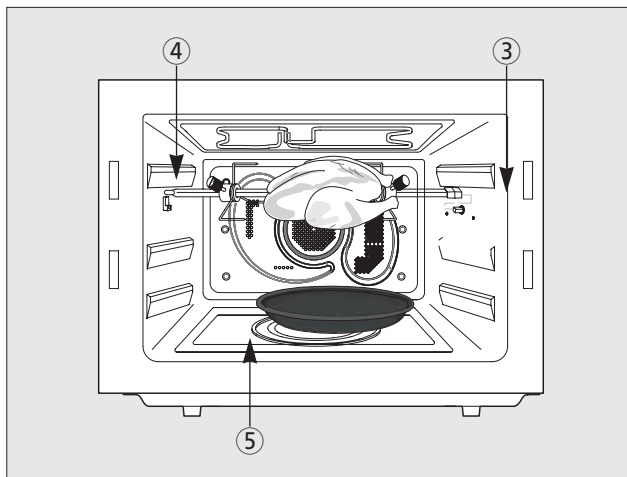
- ② Fix forks by turing the Fixture



- ③ Insert the right shaft of bar into the motor

- ④ Put the left shaft of bar on the holder of rotisserie.

- ⑤ Put the base bowl of steam bowl on the center of bottom The base bowl of steam bowl is usually used to catch any fat and/or grease dripping from food placed directly on the grid or to cook food directly.



- ⑥ Start cooking by Auto cook menu 3  
For detail operation, refer to the page 14.

**WARNING:**

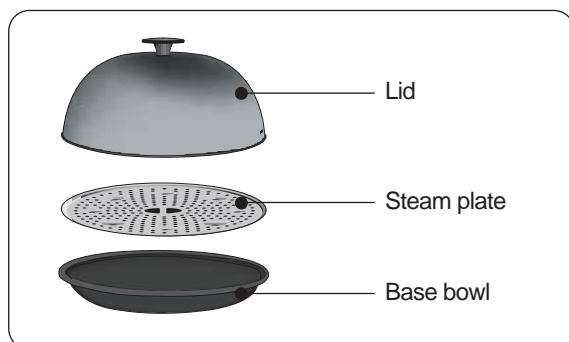
- Rotisserie is not a toy. Keep it away from children
- The oven and rotisserie are very hot after cooking.
- Use a thick oven glove while you are handing food or accessories.

**NOTE:**

- The wide glass(heat resistant) utensil can be used instead of the base bowl in autocook menu 3.
- When you operate the oven at the first time, smoke and bad odor might come out from the oven. Then, it will be helpful to operate the oven in **Convection cook** at 250°C with no food for about 10 minutes.
- The cooling fan could be operated for a few minutes after cooking for the safety. The display will show **"Cool"** and **"0"** or "current time" in turns while the cooling fan is operated.

## STEAM BOWL GUIDE (Optional)

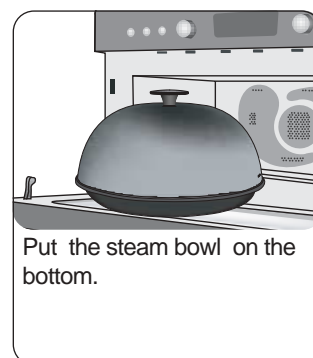
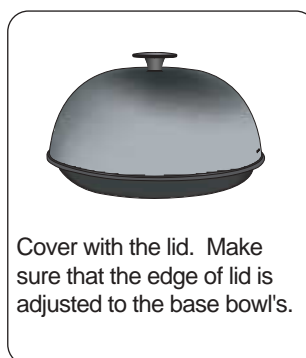
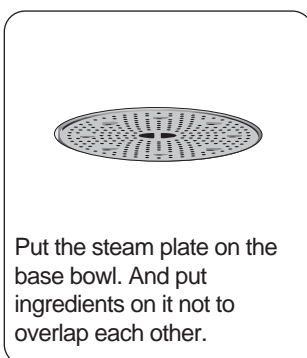
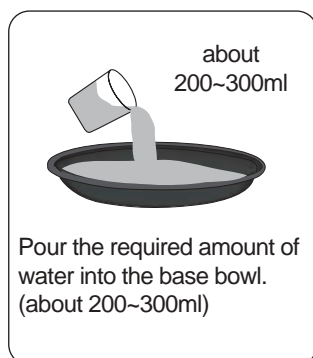
### ■ Component parts of Steam bowl



**WARNING:** • The oven and steam bowl is very hot after cooking.  
• Use thick oven globes while you are handling food or accessories.

**Tips :** You can cook small items faster than larger ones. And uniform sized food will be cooked more evenly.

### ■ How to use Steam bowl



### ■ Important Safety Instructions

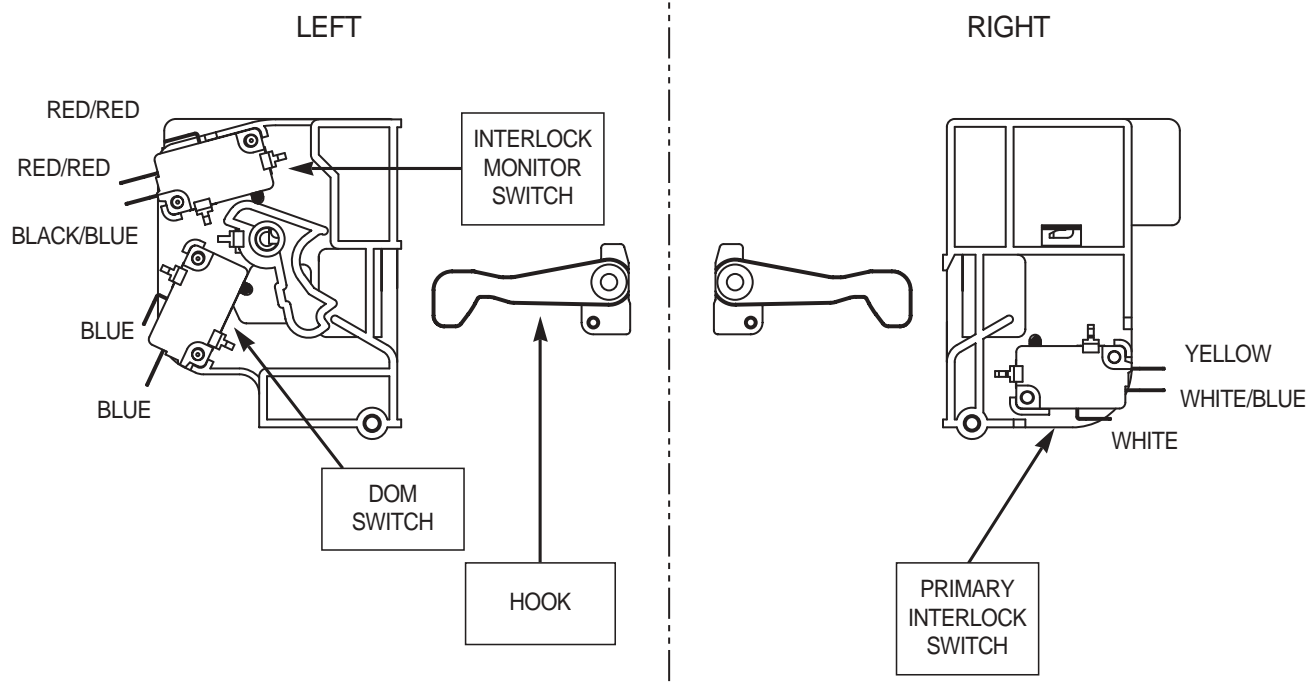
- Do not use this Steam bowl with a different product or model.
- Do not attempt to operate the oven without water or food inside.
- Before you use the Steam bowl, pour about 200 ~ 300ml of water into base bowl.  
If water is not enough in the base bowl, it could cause the oven to be damaged or fire to happen.
- Do use the Steam bowl only for its intended use as described in this manual.  
This is not intended for laboratory or industrial use.
- Do not operate the oven if the Steam bowl is damaged.
- Do not use the Steam bowl without the lid or the base bowl.
- Make sure that you install the lid onto the base bowl so that it fits into the steam plate.
- Do not touch the oven and steam bowl not wearing oven gloves.  
Because they get very hot after cooking, they can cause burns.
- Do not use outdoors.
- The eggs or the chestnuts would be exploded without the lid and the steam plate.
- Read and follow the specific precautions in the instruction of steam cooking guide.

### ■ Care and Cleaning

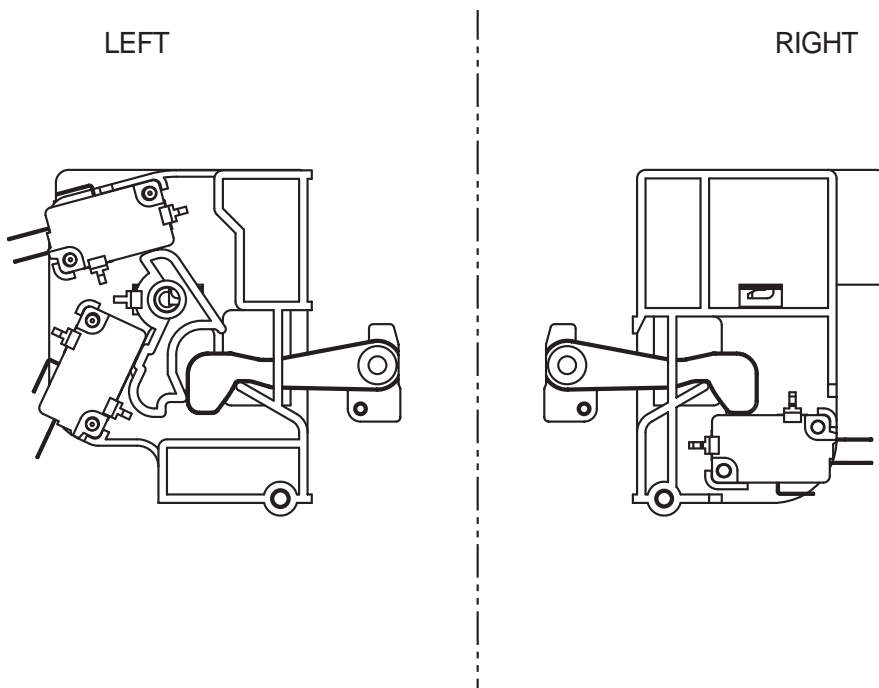
- Do not use abrasive cleaning products or solvents.
- Clean the appliance with soapy water.
- Do not immerse the Steam bowl into the water for a long time.
- Do not place the Steam bowl nearby a hot gas or electric burner or in a extremely heated oven.

## 7. INTERLOCK MECHANISM AND ADJUSTMENT

CONDITION : DOOR OPEN

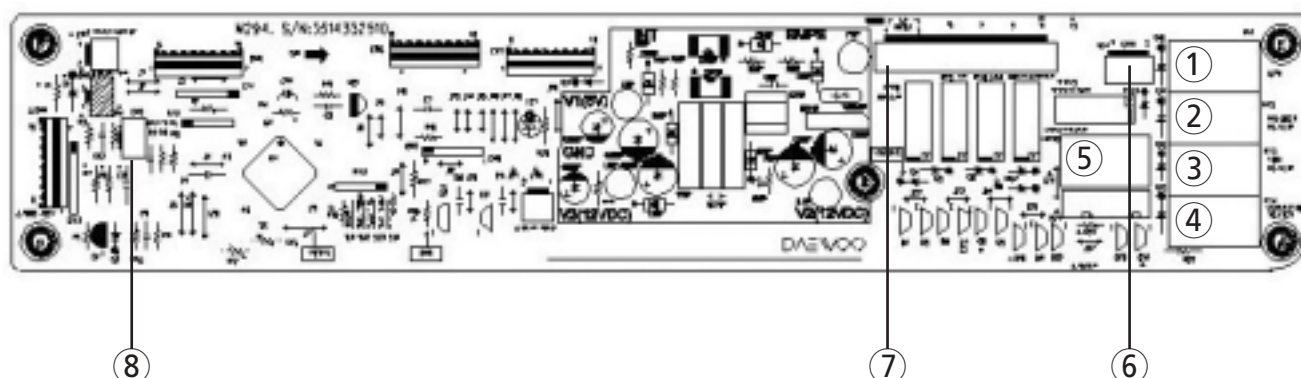


CONDITION : DOOR CLOSE

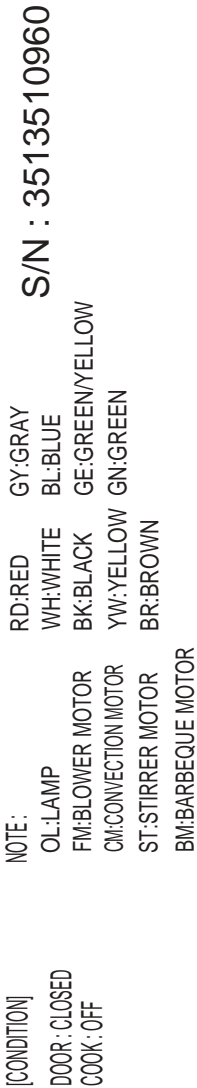


## 8. WIRING PROCEDURE

MAIN PCB



LOCATION	PART NAME	WIRING COLOR	FUNCTION
1	MW RELAY	Black & White, Black & White	Control M/W
2	HALOGEN HEATER RELAY	White & Red, Black	Control halogen heater(Side heater)
3	TOP HEATER RELAY	White & Black, Black	Control heater top
4	CONVECTION RELAY	Blue, Blue	Control heater back
5	SLOW ACTING RELAY	Blue, Blue	Prevent the current of oven from rising rapidly in Microwave Mode
6	D.O.M CONNECTOR	Blue, Green(Middle), Blue	D.O.M(DOOR OPEN MONITOR) helps the MICOM checking the Interlocking system of DOOR
7	SUB RELAY	NO. 1 : Red NO. 3 : White NO. 5 : Black NO. 7 : Blue NO. 9 : Grey	NO. 1 & 3 : Supply power to PCB NO. 5 : Convection motor NO. 7 : Blower-Motor NO. 9 : Lamp
8	THERMISTER CONNECTOR	White, White	Temperature sensor



NO	PART CODE	PART NAME	SPECIFICATION	Q'TY	REMARK
1	3966031300	MOTOR SYNCRO	SM16F -HK36T1FY	1	
2	3518303901	CAPACITOR HV	2100VAC 1.1UF #187 75M +3,-0	1	
3	3518400400	DIODE HV	HVR-1X-3AB 12KV #187	1	
4	3513601600	LAMP	BL 240V 25W T25 C7A H187	1	
5	3512783930	HARNESS MAIN	KOC-1C4K5SC1	1	
6	3512783940	HARNESS CONVECTION AS	KOC-1C4K5SC1	1	
7	3518701900	FUSE H.V	5kV 0.8A T.H.V. 060T	1	
8	4415A17352	SW MICRO	SZM-V16-FA-63	1	
9	4415A66910	SW MICRO	SZM-V16-FA-61	2	
10	3512808510	HEATER (상히터)	230V 1200W	1	
11	3518125200	TRANS HV	R1S58D	1	
12	3518606880	NOISE-FILTER	DWLF-M27-4	1	
13	35113A5Q0U	CORD POWER AS	3X1.5 80X80 120-RTML 1.55M	1	
14	3518003710	MAGNETRON	2M218HFL 6CF	1	
15	3518907010	THERMOSTAT(마그네트론)	OFF:120 ON:60 H #187 ,BRAKET	1	
16	3518904000	THERMOSTAT(상히터)	OFF:120 ON:105 V #187 BRAKET	1	
17	3518903200	THERMOSTAT(후히터)	OFF:145 ON:135 V #187 BRAKET	1	
18	3963513950	MOTOR SHADED POLE	230V 50HZ OEM-10DWC2-T08	1	
19	3512808000	HEATER(후히터)	230V 1400W / 220V 1280W KAWAI	1	
20	3963320200	MOTOR BLOWER	220V 60HZ OEB-2505B1	1	
21	3512803260	HEATER HALOGEN	230V 300W 170MM	1	
22	3966830920	MOTOR SYNCRO	SSM-23H AC220V~240V	1	

# 11. DISASSEMBLY AND ASSEMBLY

## - Cautions to be observed when trouble shooting.

Unlike many other appliances, the microwave oven is high-voltage, high-current equipment. It is completely safe during normal operation. However, carelessness in servicing the oven can result in an electric shock or possible danger from a short circuit. You are asked to observe the following precautions carefully.

1. Always remove the power plug from the outlet before servicing.
2. Use an insulated screwdriver and wear rubber gloves when servicing the high voltage side.
3. Discharge the high voltage capacitor before touching any oven components or wiring.

(1) Check the grounding.

Do not operate on a two-wire extension cord.

The microwave oven is designed to be used while grounded.

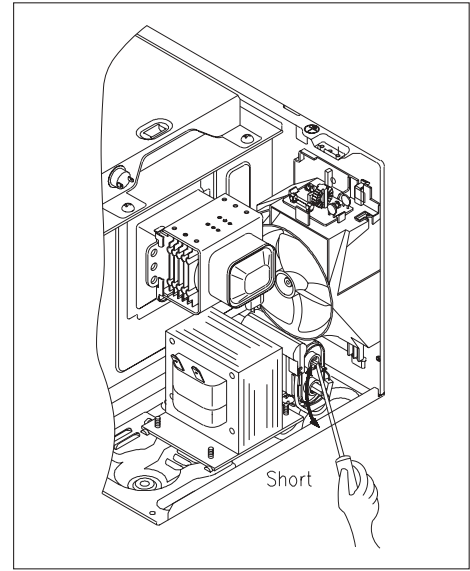
It is imperative, therefore, to make sure it is grounded properly before beginning repair work.

(2) Warning about the electric charge in the high voltage capacitor.

For about 30 seconds after the operation has stopped, electric charge remains in the high voltage capacitor.

When replacing or checking parts, short between oven chassis and the negative high terminal of the high voltage capacitor by using a properly insulated screwdriver to discharge.

4. When the 15A fuse is blown out due to the operation of the monitor switch; replace primary interlock switch, secondary interlock switch and interlock monitor switch.
5. After repair or replacement of parts, make sure that the screws are properly tightened, and all electrical connections are tightened.
6. Do not operate without cabinet.



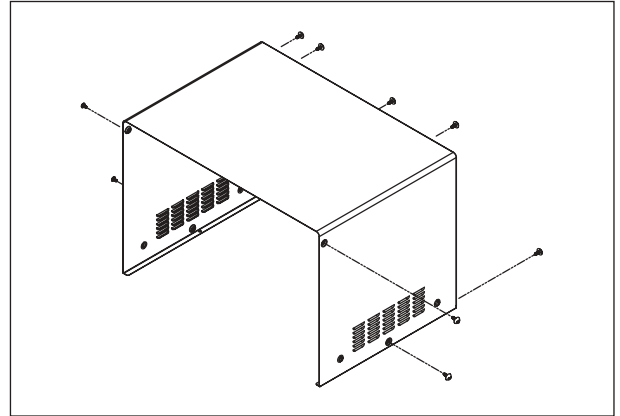
**CAUTION :** Service personnel should remove their watches whenever working close to or replacing the magnetron.

**WARNING :** When servicing the appliance, take care when touching or replacing high potential parts because of electrical shock or exposing microwave. These parts are as follows - HV Transformer, Magnetron, HV Capacitor, HV Diode.

## 12. DISASSEMBLY AND ASSEMBLY

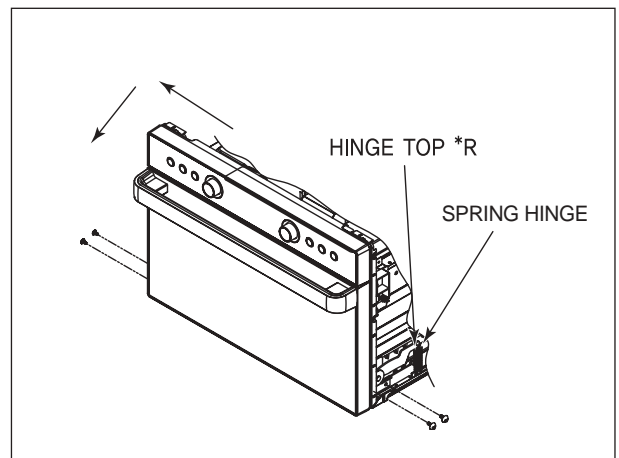
### 1. To remove cabinet

- 1) Remove four screws on cabinet back.
- 2) Push the cabinet backward.



### 2. To remove door ASS'Y

- 1) Remove each two screws (total 4EA) on left and right sides.
- 2) Remove spring hinges in both sides.  
\* It is easy to remove the bottom of spring firstly and to set the top of spring firstly.
- 3) Remove HINGE TOP \*R and HINGE TOP \*L.  
\* HINGE TOP must be connected to the inside of DOOR.
- 4) Reverse the above steps for reassembly.

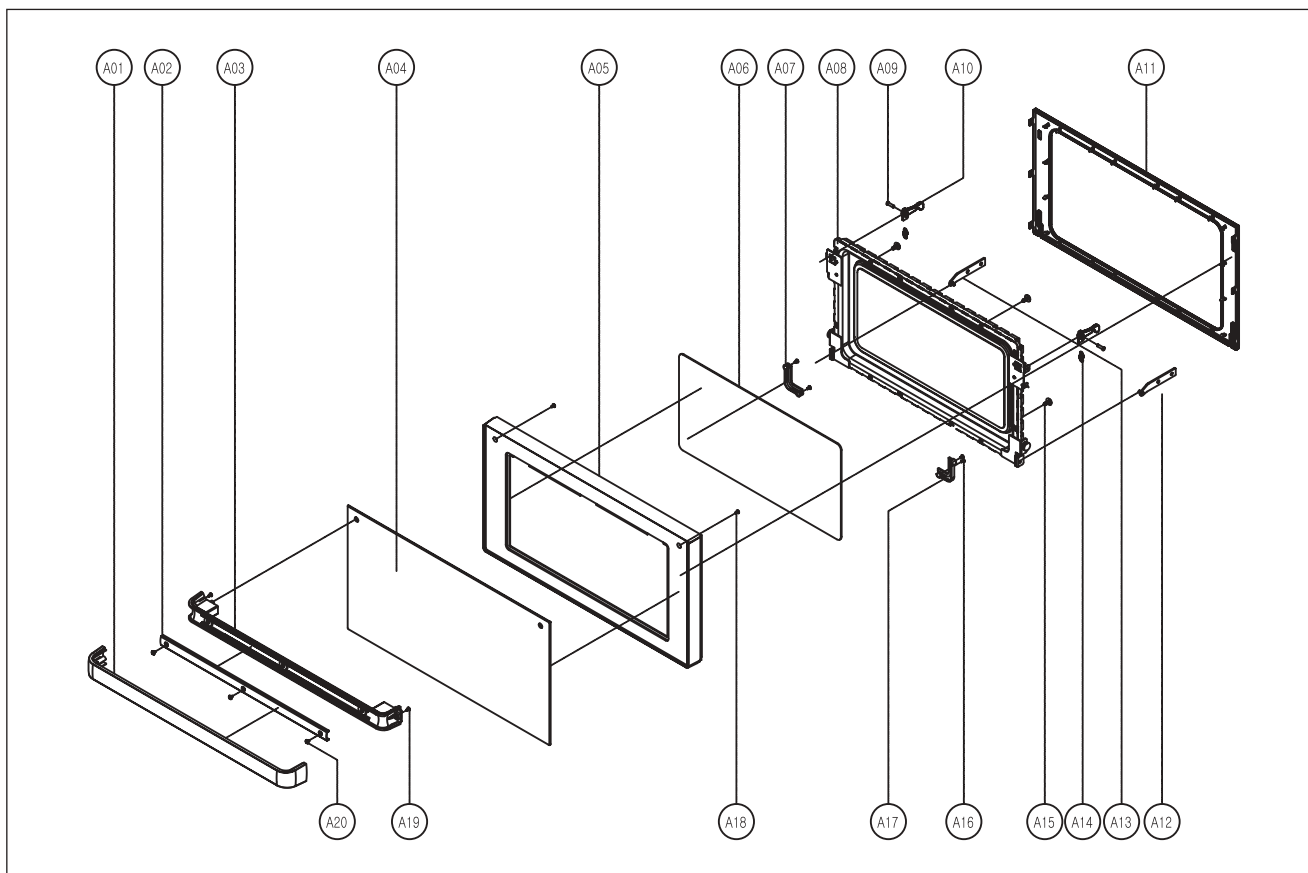


### 3. To remove C-Panel ASS'Y

- 1) Remove the screws.
- 2) Slide the C-PANEL in the direction of left and pull out forward.
- 3) Reverse the above steps for reassembly.

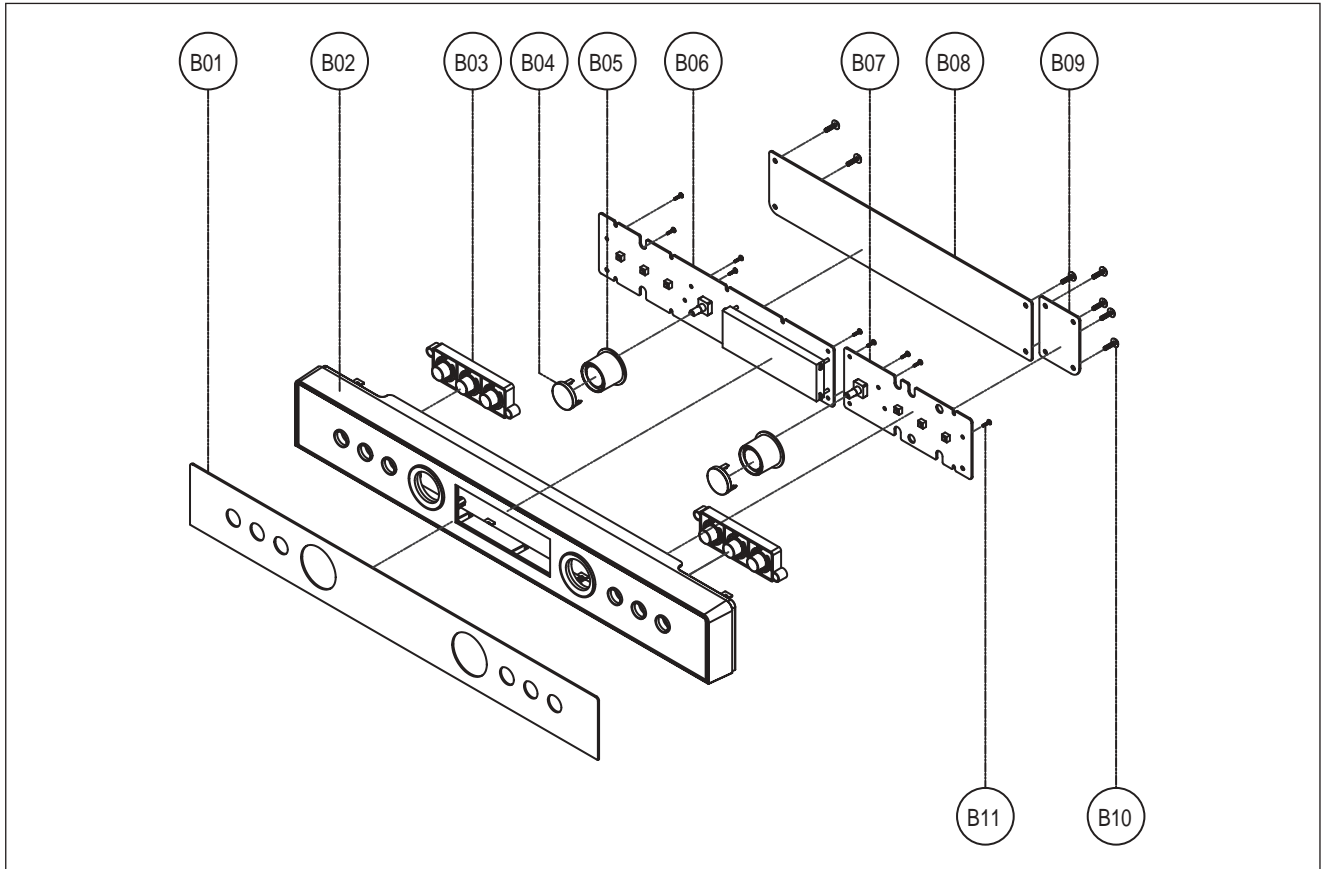


#### 4. EXPLODED VIEW AND PARTS LIST OF DOOR ASS'Y.



NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
A01	3512603830	HANDLE DOOR *O	ABS SPRAY KOC-1C0KQS	1	
A02	3515309510	SUPPROTER HANDLE	PO T1.6	1	
A03	3512603910	HANDLE DOOR *I	ABS	1	
A04	3517010720	BARRIER SCREEN *O	TEMP GLASS T3.2 WHITE PATTERN	1	
A05	3512210320	FRAME DOOR	PC+ABS HR-5007A SPRAY KOC-1C0KQS	1	
A06	3513304620	INSULATOR GLASS	T2.0 TEMPERED	1	
A07	3513003100	HOLDER INNER GLASS *R	PBT	1	
A08	3511728810	DOOR PAINTING AS	KOC-1C0KQS	1	
A09	3512902020	HINGE HOOK	SWRM3	2	
A10	3513102100	HOOK	ZN DIE CASTING	2	
A11	3512303000	GASKET DOOR	PBT	1	
A12	3512902000	HINGE UNDER *L AS	KOC-1C0KQS	1	
A13	3512902010	HINGE UNDER *R AS	KOC-1C0KQS	1	
A14	3515103600	SPRING HOOK	PW1	2	
A15	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	3	
A16	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	4	
A17	3513003100	HOLDER INNER GLASS *R	PBT	1	
A18	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	2	
A19	7121401211	SCREW TAPPING	T2S PAN 4X12 MFZN	2	
A20	7121400612	SCREW TAPPING	T2S PAN 4X7 MFZN	3	

## 5. EXPLODED VIEW AND PARTS LIST OF CONTROL PANEL.

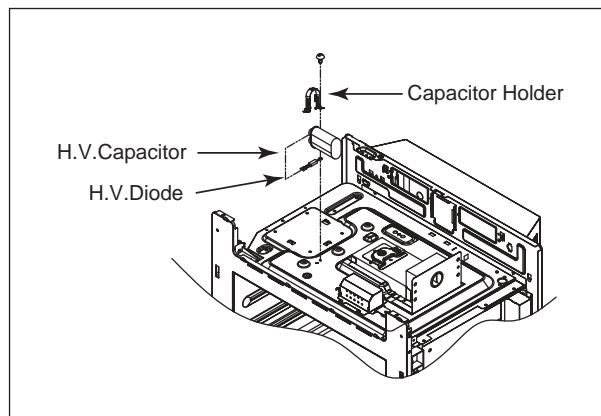


NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
B01	3511620110	DECORATOR C-PANEL	SAN T1.5 WHITE	1	
B02	3516725920	CONTROL-PANEL	PC+ABS HR5007A SPRAY KOC-1C0KQS	1	
B03	3516913020	BUTTON FUNCTION-A	ABS COATING	2	
B04	3516913010	DECORATOR KNOB	ABS COATING	2	
B05	3513411530	KNOB VOLUME	ABS SPRAY KOC-1C0KQS	2	
B06	3514333100	PCB MAIN AS	KOC-1C0KQS	1	
B07	3514333200	PCB SUB1 AS	KOC-1C0KQS(GENERAL)	1	
B08	3514333300	PCB SUB2 AS	KOC-1C0KQS	1	
B09	3514333400	PCB SUB3 AS	KOC-1C0KQS	1	
B10	7621301011	SCREW TAPPING	T2S PAN 3X10 PW MFZN	9	
B11	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	7	

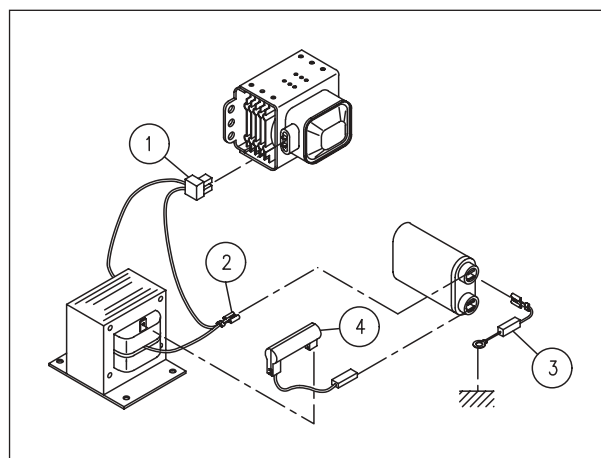
## 6. To remove high voltage capacitor

- 1) Remove a screw which secure the grounding ring terminal of the H.V.diode and capacitor holder.
- 2) Remove the H.V.capacitor from the capacitor holder.
- 3) Remove the H.V.diode from the H.V.Capacitor.
- 4) Reverse the above steps for reassembly.

**NOTE:** Connecting procedure of magnetron, H.V. transformer, H.V. diode, H.V. fuse, H.V. capacitor.

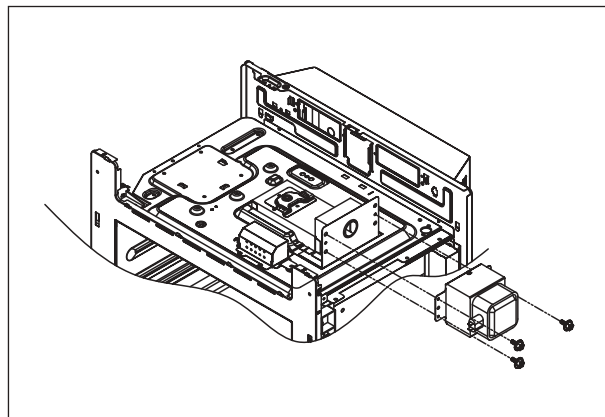


- 1) Connect two terminals(①) from H.V. transformer to magnetron using the all-in-one connector.
- 2) Connect the connector, which connected two wires(②) from H.V. transformer, to H.V. capacitor .
- 3) Connect H.V. diode(③) to H.V. capacitor in same location with terminal ②
- 4) The one direction of ④ connect to secondary terminal of H.V. transformer and another connect to H.V capacitor(except of terminal ②, ③)

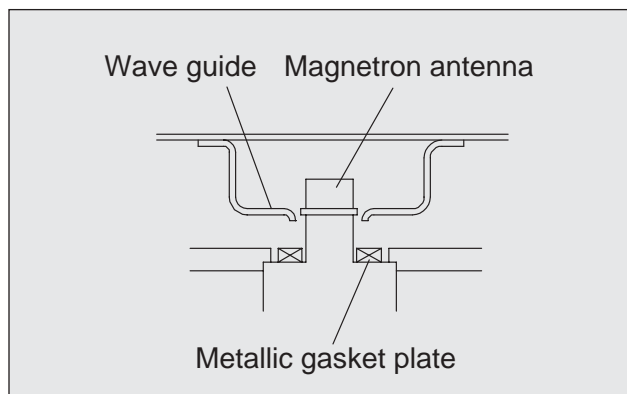
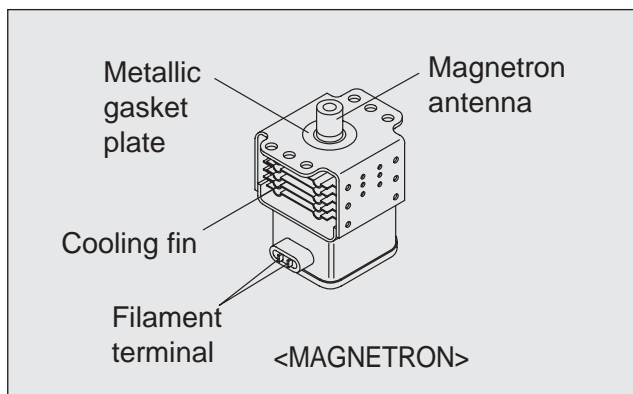


## 7. TO REMOVE MAGNETRON

- 1) Remove a screw which secure the magnetron.
- 2) Remove the magnetron.
- 3) Reverse the above steps for reassembly.

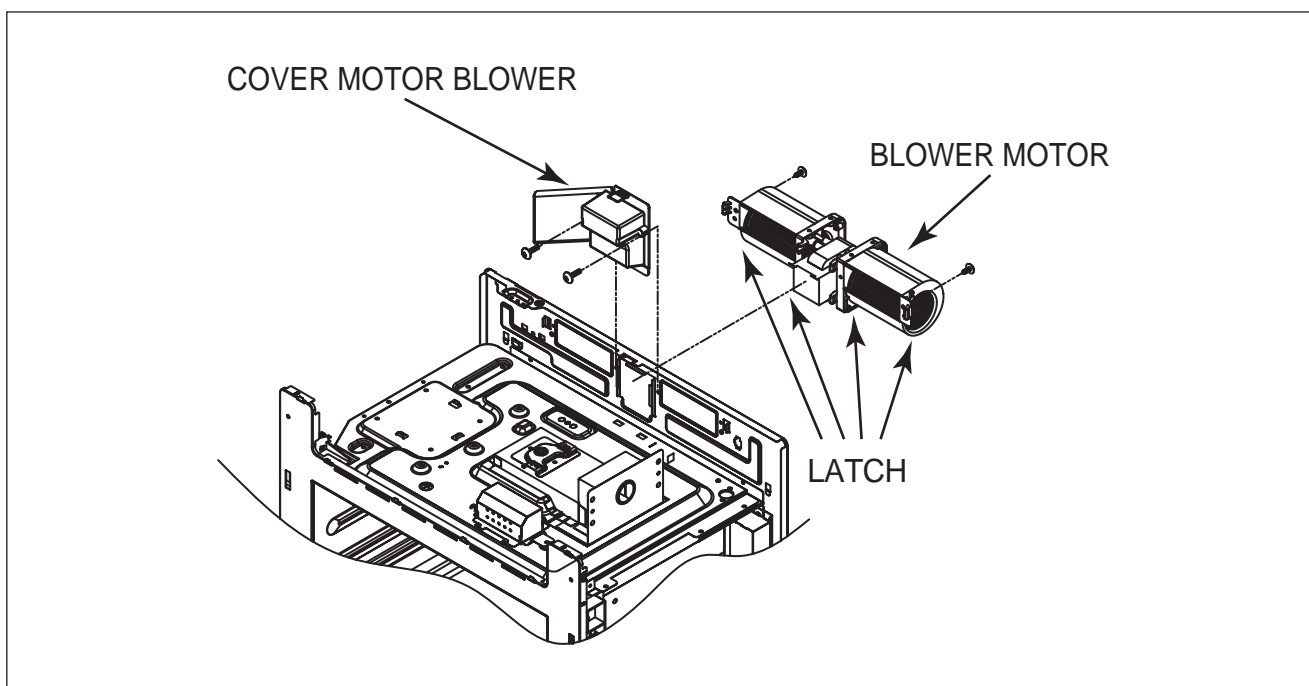


**NOTE:** Never install the magnetron without the metallic gasket plate which is packed with each magnetron to prevent microwave leakage. Whenever repair work is carried out on magnetron, check the microwave leakage. It shall not exceed 4mW/cm<sup>2</sup> for a fully assembled oven with door normally closed.



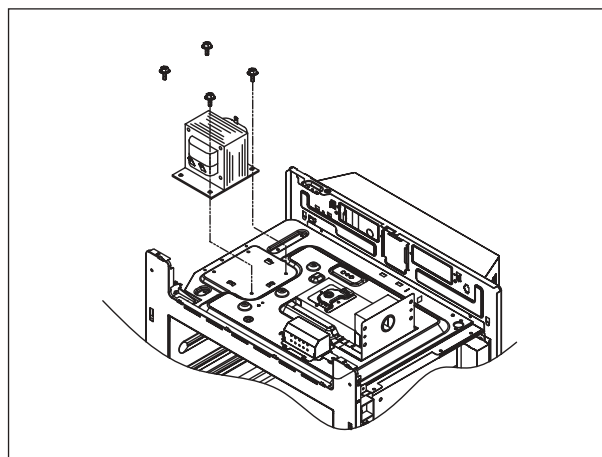
## 8. TO REMOVE BLOWER MOTOR

- 1) Remove a screw which secure the cover motor blower.
- 2) Remove a screw which secure the blower motor.
- 3) Remove the cover motor blower.
- 4) Remove the wire which connecting the blower motor
- 5) Push a latch of blower motor and draw backward
- 6) Reverse the above steps for reassembly.



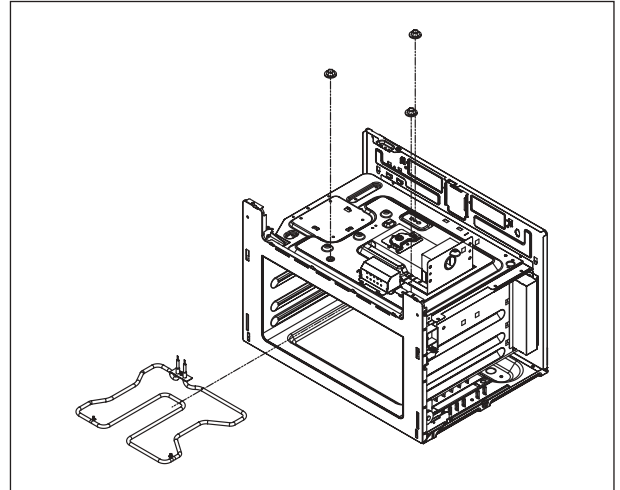
## 9. TO REMOVE H.V.TRANSFORMER

- 1) Remove four screws holding the H.V.transformer.
- 2) Remove the H.V.transformer.
- 3) Reverse the above steps for reassembly.



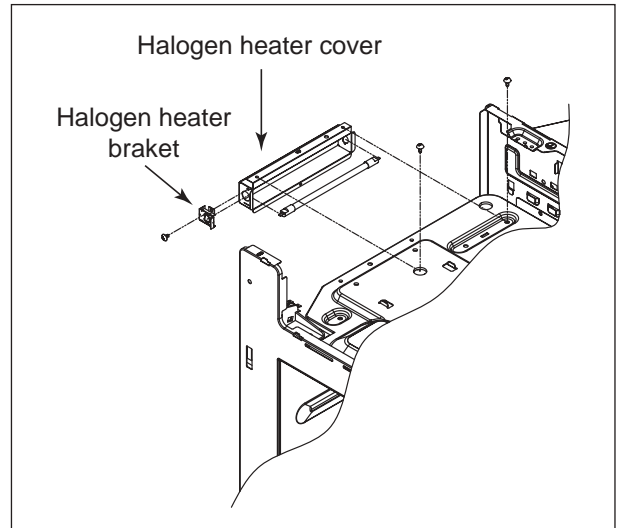
## 10. TO REMOVE TOP HEATER

- 1) Remove a nut which secure the top heater.
- 2) Pull out the heater.



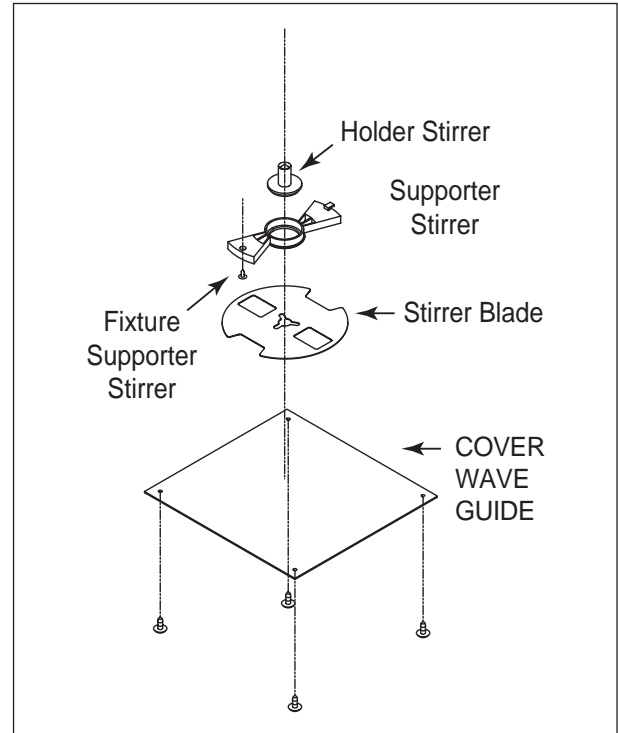
## 11. TO REMOVE HALOGEN HEATER (SIDE HEATER)

- 1) Remove a screw in insulator heater top.
- 2) Remove the wire which connecting the halogen heater.
- 3) Remove a screw on cover of halogen heater.
- 4) Remove a bracket of halogen heater.
- 5) Remove a halogen heater.
- 6) Reverse the above steps for reassembly.



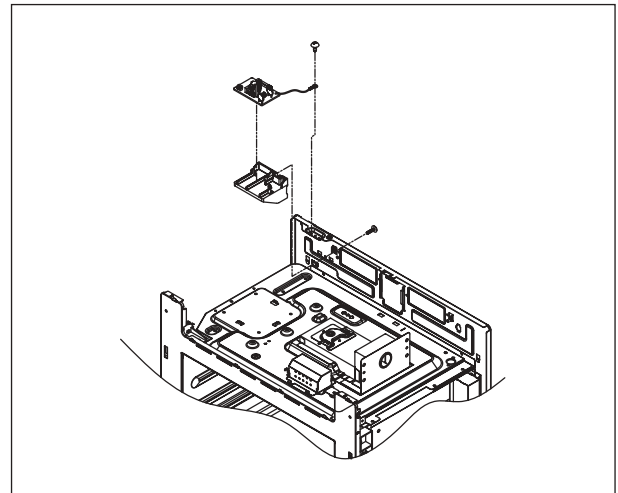
## 12. TO REMOVE STIRRER FAN

- 1) Remove a screw to the cover wave guide.
- 2) Push the fixture supporter in top plate.
- 3) Remove a holder stirrer from the stirrer motor.
- 4) Rotate the holder stirrer about 45°C and reassemble from groove of the stirrer blade.
- 5) Remove holder stirrer and supporter stirrer.
- 6) Reverse the above steps for reassembly.



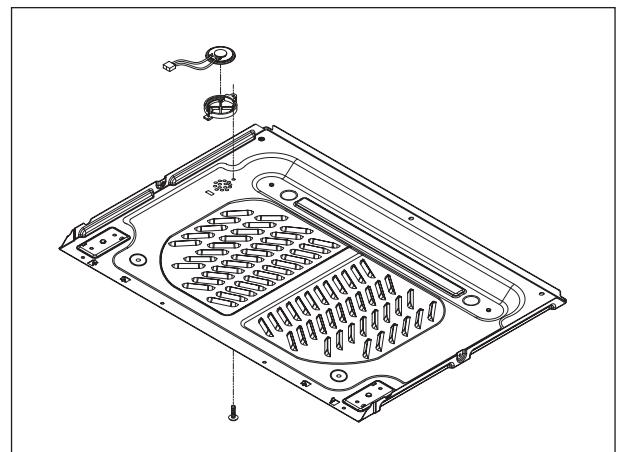
## 13. TO REMOVE NOISE FILTER

- 1) Remove a screw which secure the noise filter.
- 2) Remove a screw which earth to wire from noise filter.
- 3) Remove a noise filter from the bracket noise filter.

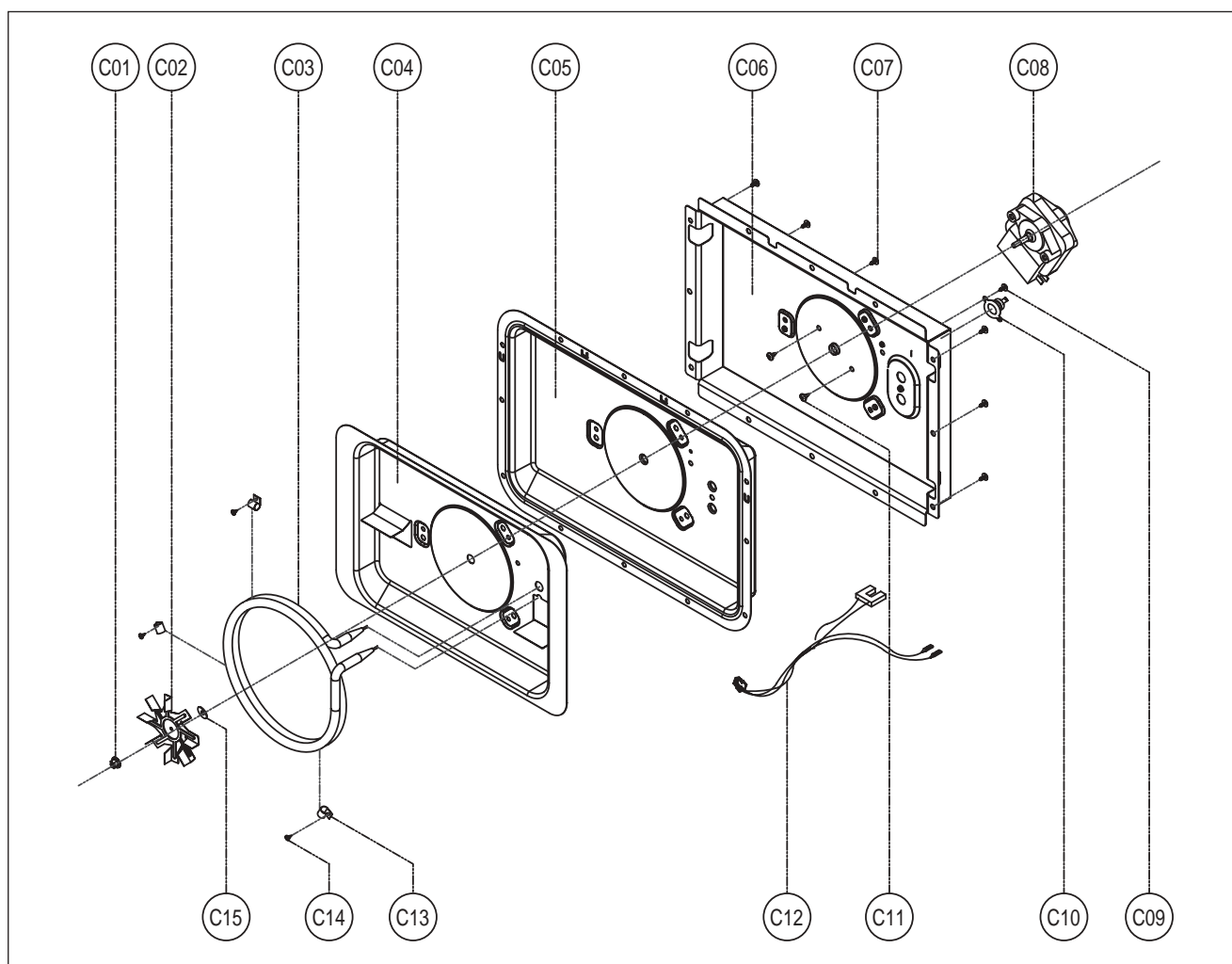


## 14. TO REMOVE SPEAKER

- 1) Remove a screw which secure the base plate and speaker holder
- 2) Remove speaker holder and speaker



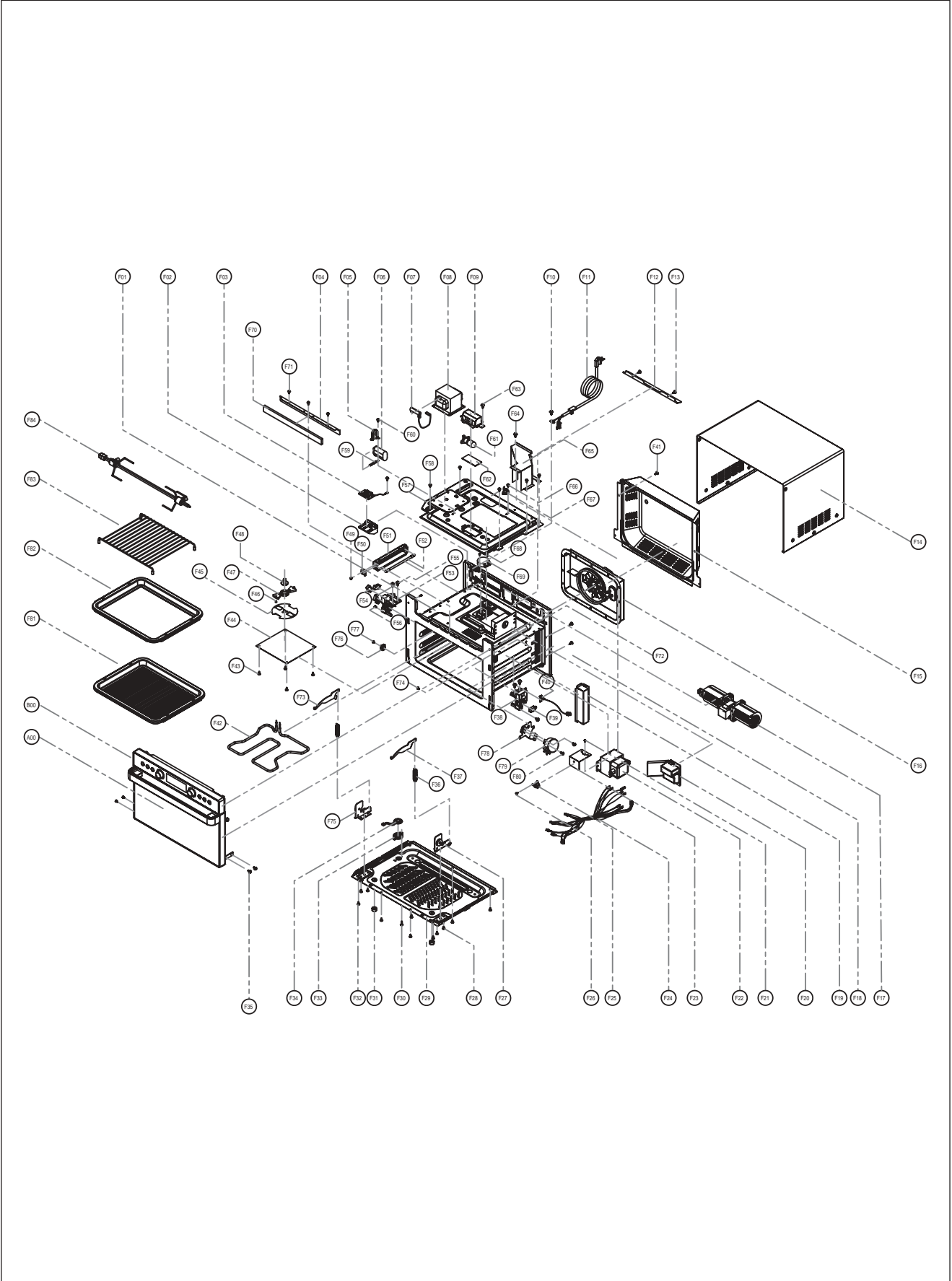
## 15. EXPLODE VIEW AND PARTS LIST OF BACK HEATER ASSEMBLY



NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
C01	7S628W40X1	NUT HEX	NUT FLANGE M4X0.7P MFZN	1	
C02	3511800700	FAN CONVECTION	SA1D T0.5	1	
C03	3512808000	HEATER	230V 1400W KAWAI	1	
C04	3512806000	HEATER REFLECTOR	SA1D T0.5	1	
C05	3511409800	COVER HEATER *B	SA1D-80 T0.5	1	
C06	3513303400	INSULATOR HEATER *B	SBHG-1 T0.5	1	
C07	7113400814	SCREW TAPPING	T1 BIN 4X8 MFNI	6	
C08	3963513950	MOTOR SHADED POLE	230V 50HZ ,OEM-10DWC2-T08	1	
C09	7121400611	SCREW TAPPING	T2S PAN 4X6 MFZN	1	
C10	3518903200	THERMOSTAT	OFF:145 ON:135 V #187	1	
C11	7601400811	SCREW MACHINE	PAN 4X8 PW MFZN	2	
C12	3512783940	HARNESS CONVECTION AS	KOC-1C4K5SC1	1	
C13	3513002300	HOLDER HEATER	SUS304 T0.5	3	
C14	7113400814	SCREW TAPPING	T1 BIN 4X8 MFNI	3	
C15	7400104011	WASHER PLAIN	PW-1-4 MFZN	1	



16. TOTAL ASSEMBLY AND PARTS LIST



NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
A00	3511730010	DOOR AS	KOC-1C0KB or KOC-1C0K5SC2	1	
	3511730020		KOC-1C0KBS or KOC-1C0K5SC3	1	
	3511730000		KOC-1C4KB or KOC-1C4K5SC1	1	
B00	PKCPSWAL40	CONTROL-PANEL AS	KOC-1C0KB or KOC-1C0K5SC2	1	
	PKCPSWAL70		KOC-1C0KBS or KOC-1C0K5SC3	1	
	PKCPSWALA0		KOC-1C4KB or KOC-1C4K5SC1	1	
F01	3516120000	CAVITY AS	KOC-1C0KQS	1	
F02	3510611600	BRACKET NOISE FILTER	PP	1	
F03	3518606880	NOISE FILTER	DWLF-M27-4 250V 15A	1	
F04	3517505200	PROTECTOR WIRE	STS T0.6	1	
F05	3513001900	HOLDER HV CAPACITOR	SECC T0.5	1	
F06	3518303901	CAPACITOR HV	2100VAC 1.1UF #187+3	1	
F07	3518701900	FUSE HV	5KV 0.8A T.H.V.060T	1	
F08	3518125200	TRANS HV	R1S58D	1	
F09	3513005300	HOLDER LAMP	STS T0.4	1	
F10	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	2	
F11	35113A5Q0U	CODE POWER AS	3X1.5 80X80 120-RTML 1.55M	1	
F12	3517505210	PROTECTOR HEAT	STS T0.6	1	
F13	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	2	
F14	3510810920	CABINET AS	KOC-1C0KQS	1	
F15	3511415000	COVER *B	SBHG T0.8	1	
F16	3512808420	HEATER *B AS	KOC-1C0K5SC2	1	
F17	3963320200	MOTOR BLOWER	220V~240V 60Hz OEM-2505B1	1	
F18	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	2	
F19	3511415100	COVER EXHAUST	GAL T0.5	1	
F20	3511415200	COVER MOTOR BLOWER	PP(TB-53)	1	
F21	7121400611	SCREW TAPPING	T2S PAN 4X6 MFZN	1	
F22	3518003710	MAGNETRON	2M218HFL 6CF	1	
F23	3512527810	GUIDE AIR	SECC T0.5	1	
F24	3512783930	HARNESS MAIN	KOC-1C4K5SC1	1	
F25	3518907010	THERMOSTAT	OFF:120 ON:60 V #187	1	
F26	7121400611	SCREW TAPPING	T2S PAN 4X6 MFZN	1	
F27	3510613030	BRACKET ROLLER *R AS	KOC-1C0KQS	1	
F28	3516003700	SCREW SPECIAL	TTS HEX 4X8 FLG MFZN	4	
F29	3510313410	BASE	SBHG T0.7	1	
F30	7122401211	SCREW TAPPING	T2 TRS 4X12 MFZN	1	
F31	3512101400	FOOT	DASF-310	2	
F32	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	9	
F33	3513005600	HOLDER SPEAKER	PP	1	
F34	3510019540	SPEAKER AS	3608B(052-002)	1	
F35	7272400811	SCREW TAPTIE	TT3 TRS 4X8 MFZN	4	
F36	3515103500	SPRING HINGE	PW1	2	
F37	3510611900	HINGE TOP *R	PO T2.6	1	
F38	3513821210	LOCK *R	PBT EE-2306F(V0)	1	
F39	4415A17352	SW MICRO	VP-533-OF SPNO #187 200G	1	

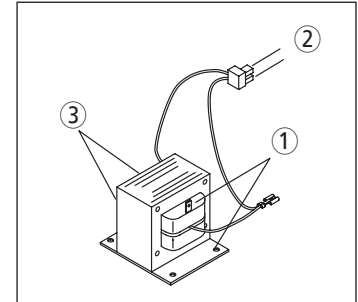
NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
F40	3514801900	SENER TEMPERATURE	PTM-K312-D10	1	
F41	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	1	
F42	3512808510	HEATER GRILL	230V 1200W	1	
F43	7113400810	SCREW TAPPING	T1 BIN 4X8 STS430 MFZN	4	
F44	3511408320	COVER WAVE GUIDE	MICA T1.0	1	
F45	3517101410	STIRRER BLADE	AL050-H18 T0.6	1	
F46	3512001100	FIXTURE SUPPORTER STIRRER		PTFE	1
F47	3515309800	SUPPORTER STIRRER	PFA	1	
F48	3513005500	HOLDER STIRRER	PTFE	1	
F49	7121400611	SCREW TAPPING	T2S PAN 4X6 MFZN	1	
F50	3510611500	BRACKET HEATER	SECC T0.5	1	
F51	3511414910	COVER HEATER HALOGEN	STS T0.4	1	
F52	3512803260	HEATER HALOGEN	230V 300W, TUBE 170MM	1	
F53	3513821220	LOCK *L	PBT EE-2306F(V0)	1	
F54	4415A66910	SW MICRO	VP-531-OF / SZM-V16-FA-61	2	
F55	3513703700	LEVER LOCK	POM	1	
F56	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	6	
F57	3513304610	INSULATOR HEATER *T	SBHG T0.8	1	
F58	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	5	
F59	3518400400	DIODE HV	HVR-1X-3AB 12KV #187	1	
F60	7122400811	SCREW TAPPING	T2S TRS 4X8 MFZN	1	
F61	3513601600	LAMP	BL 240V 25W T25 C7A H187	1	
F62	3511407810	COVER LAMP	T/GLASS T2.0	1	
F63	7122400811	SCREW TAPPING	HVR-1X-3AB 12KV #187	1	
F64	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	3	
F65	3512529710	GUIDE WIND	SECC T0.4	1	
F66	7121400611	SCREW TAPPING	T2S PAN 4X6 MFZN	1	
F67	3518904000	THERMOSTAT	OFF:120 ON:105 V #187	1	
F68	7121400611	SCREW TAPPING	T2S PAN 4X6 MFZN	2	
F69	3966031300	MOTOR SYNCRO	SM16F -HK36T1FV	1	
F70	3517307300	FOAM	UR T5X25X360	1	
F71	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	3	
F72	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	2	
F73	3510611910	HINGE TOP *L	PO T2.6	1	
F74	7113400810	SCREW TAPPING	T1 BIN 4X8 STS430 MFZN	1	
F75	3510613020	BRACKET ROLLER *L AS	KOC-1C0KQS	1	
F76	3512530200	GUIDE ROTARY	TEFLON KOC-1C4K5SC1	1	
F77	7112400816	SCREW TAPPING	T1 TRS 4X8 SE MFZN	1	
F78	3966830920	BRACKET MOTOR	SSM-23H	1	
F79		MOTOR SYNCRO			
F80	7112400816	SCREW TAPPING	T1 TRS 4X8 SE MFZN	1	
F81	3517212200	TRAY GRILL AS	KOC-1C0KQS	1	
F82	3517212100	TRAY METAL AS	KOC-1C0KQS	1	
F83	3517212400	TRAY RACK AS	KOC-1C0KQS	1	
F84	3517606700	UTENSIL BAR AS	KOC-1C0K5SC2	1	

## 12. COMPONENT TEST PROCEDURE

- High voltage is present at the high voltage terminal of the high voltage transformer during any cooking cycle.
- It is neither necessary nor advisable to attempt measurement of the high voltage.
- Before touching any oven components or wiring, always unplug the oven from its power source and discharge the capacitor.
- To measure resistance of each component, refer to figures.

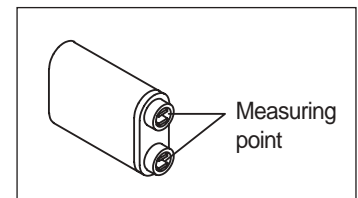
### 1. High voltage transformer

- 1) Remove connections from the transformer terminals and check continuity.
- 2) Normal readings should be as follows :
  - ① Secondary winding ... Approx.  $130\Omega \sim 160\Omega$
  - ② Filament winding ... Approx.  $0.2\Omega \sim 0.4\Omega$
  - ③ Primary winding ... Approx.  $1.3\Omega \sim 2.1\Omega$



### 2. High voltage capacitor

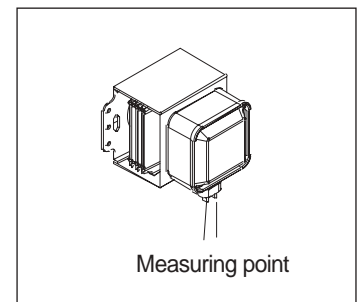
- 1) Check continuity of capacitor with meter on the highest OHM scale.
- 2) A normal capacitor will show continuity for a short time, and then indicate  $10M\Omega$  once the capacitor charged.
- 3) A shorted capacitor will show continuous continuity.
- 4) An open capacitor will show constant  $10M\Omega$ .
- 5) Resistance between each terminal and chassis should be infinite.



### 4. Magnetron

For complete magnetron diagnosis, refer to "Measurement of the Microwave Power Output." Continuity checks can only indicate an open filament or a shorted magnetron. To diagnose for an open filament or a shorted magnetron,

- 1) Isolate magnetron from the circuit by disconnecting the leads.
- 2) A continuity check across magnetron filament terminals should indicate  $0.1\Omega$  or less.
- 3) A continuity check between each filament terminal and magnetron case should read open.

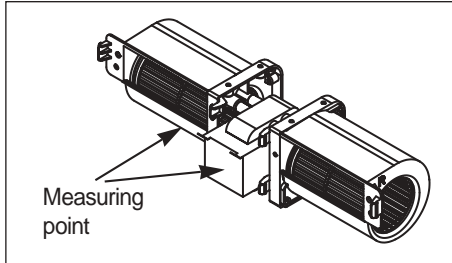


### 5. Fuse

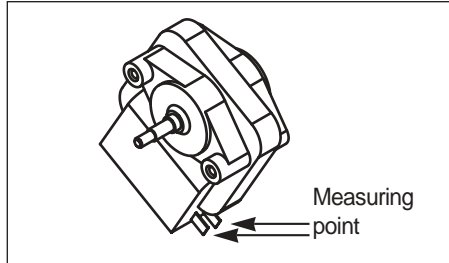
If the fuse in the primary and monitor switch circuit is blown when the door is opened, check the primary and monitor switch before replacing the blown fuse. In case the fuse is blown by an improper switch operation, replace the defective switch and fuse at the same time. Replace just the fuse if the switches operate normally.

## 5. BLOWER MOTOR AND CONVECTION MOTOR

- 1) Remove a connector from the motor.
- 2) Measure resistance between two terminals like as following figure.
- 3) Reading of blower motor is  $60\Omega$  and convection motor is  $270\Omega$ .
- 4) It is normal to stop convection motor smoothly, when door is open during convection mode.  
=> You can see the motion of convection motor,



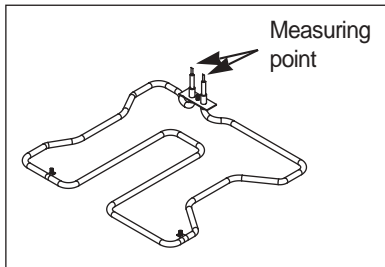
BLOWER MOTOR



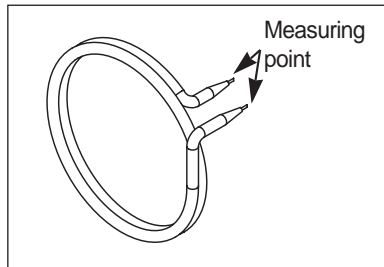
CONVECTION MOTOR

## 6. HEATER (TOP HEATER, REAR HEATER, HALOGEN HEATER)

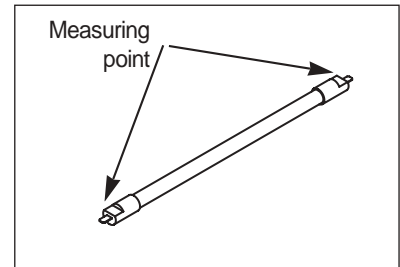
- 1) Remove a connector from the heater
- 2) Measure resistance between two terminals like as following figure.
- 3) Normal readings of top heater, rear heater and halogen heater are  $36\Omega$ ,  $36\Omega$ ,  $23\Omega$ .
- 4) The oven should be cooled enough to measure resistance of the heater.



TOP HEATER



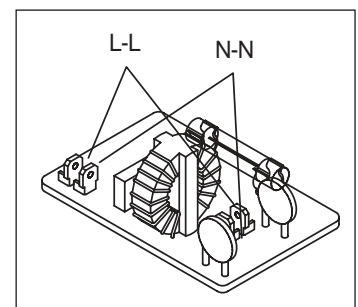
REAR HEATER



HALOGEN HEATER

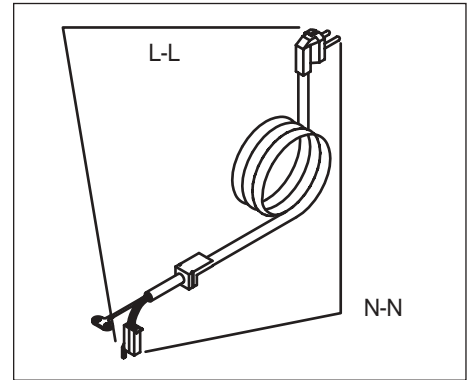
## 7. NOISE FILTER

- 1) Remove a connector from the noise filter.
- 2) Check each continuity of N-N and L-L terminal like as following figure.
- 3) It should be normal to keep continuous continuity.



## 8. POWER CODE

- 1) Remove a connector from the power code.
- 2) Check each continuity of N-N and L-L terminal like as following figure.
- 3) It should be normal to keep continuous continuity.

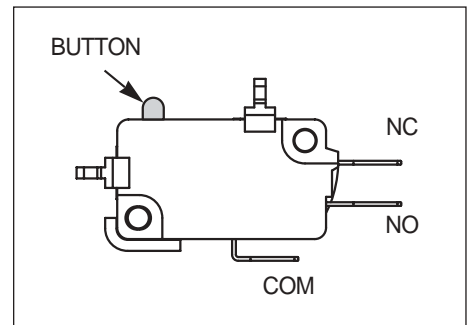


## 9. INTERLOCK SWITCH

There are three terminals in interlock switch : COM, NO, NC.

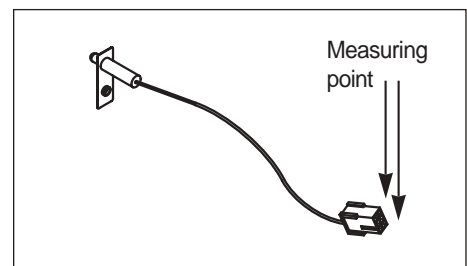
- 1) NC and COM terminals are connected by ordinary condition.
- 2) NO and COM terminals are connected by pushing a button terminal.

It is the same to two terminal interlock switch and Confirm the connection of terminals by pushing button terminal to check continuity of interlock switch.



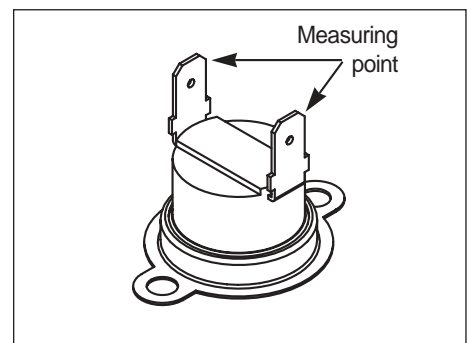
## 10. THERMESTER (Temperature sensor)

Thermester is a variable resistance by temperature. Normal resistance should be 200~300Ω in ambient(room) temperature.



## 11. THERMOSTAT (Anti-superheating device)

Thermostat shut off power supply through opening connection of terminals, when product arrive in particular temperature by superheating.



# 13. TROUBLE SHOOTING GUIDE

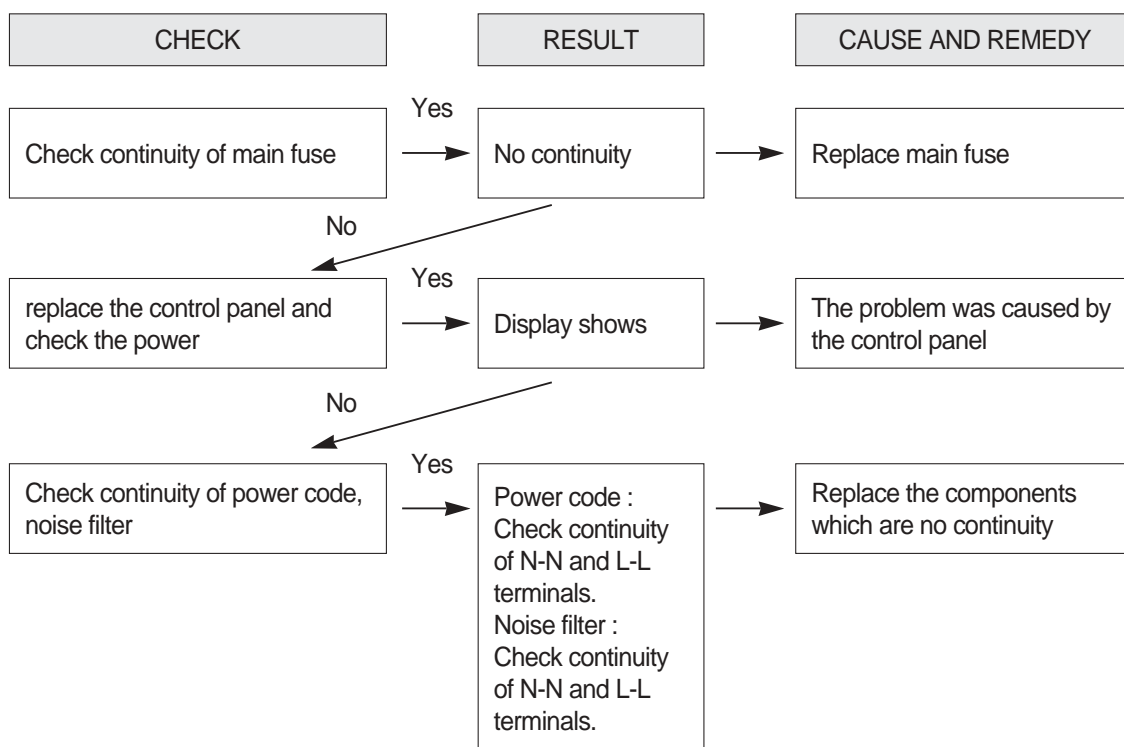
Following the procedure below to check if the oven is defective or not.

- 1) Check grounding before checking trouble
- 2) Be careful of the high voltage circuit.
- 3) Discharge the high voltage capacitor.
- 4) When checking the continuity of the switches, fuse or high voltage transformer, check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter or harmful to your body

**NOTE :** When electric parts are checked, be sure the power cord is not inserted the wall outlet. Check wire harness, wiring and connection of the terminals and power cord before check the parts listed below.

**TROUBLE 1) Despite plugging the cord into the outlet , but the display doesn't show.**

## 1. Check points



## 2. Check points after repair

- After repair or replacement of parts, operate the oven in M/W mode.  
There will be occur following problems.

### 2-1) Display doesn't show again, after opening and closing the door

CHECK	RESULT	CAUSE AND REMEDY
Check the continuity between the primary interlock switch and the monitor switch	find the trouble in switch	1) Replace switch 2) Replace main fuse

### 2-2) There is no problem during opening and closing the door, but display doesn't show as soon as the oven operate in Microwave mode

CHECK	RESULT	CAUSE AND REMEDY
Check the connecting location of H.V. transformer, H.V. diode and H.V. capacitor	False connection	1) Modify connection 2) Replace main fuse
	Right connection	1) Replace H.V. transformer 2) Replace main fuse



## Trouble2) Although display shows, No microwave oscillation or the oven does not start cooking

### 1. Check points

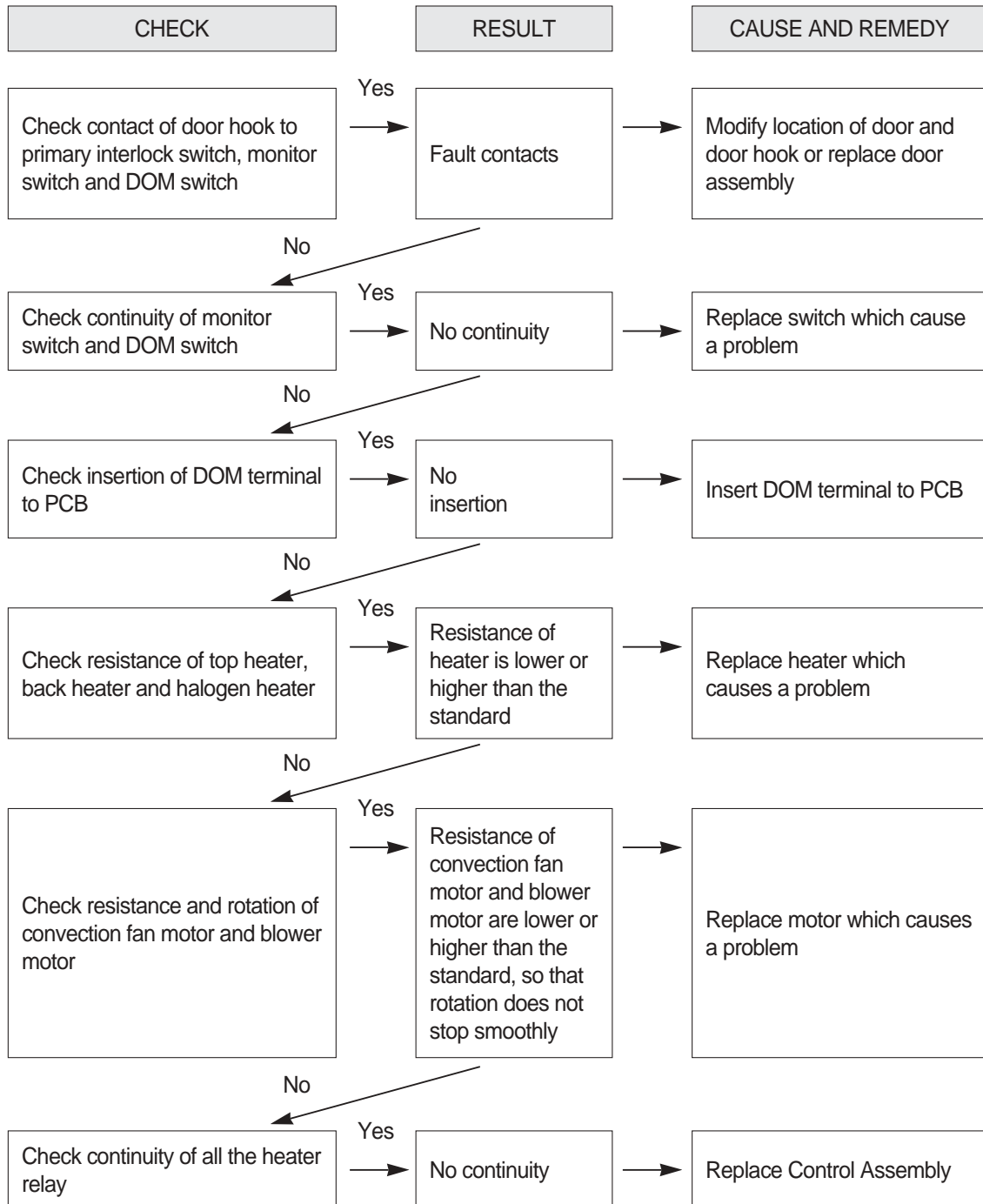
CHECK	RESULT	CAUSE AND REMEDY
Check contact of door hook to primary interlock switch, monitor switch and DOM switch	Yes → Fault contacts	→ Modify location of door and door hook or replace door assembly
No ↓ Check continuity of monitor switch and DOM switch	Yes → No continuity	Check → Replace switch which causes a problem
No ↓ Check insertion of DOM terminal to PCB	Yes → No insertion	→ Replace high voltage fuse
No ↓ Check continuity of high voltage fuse	Yes → No continuity	→ Replace high voltage fuse
No ↓ Check the problems of magnetron	Yes → Resistance of magnetron is lower than the standard or Insulation is defected	→ Replace magnetron
No ↓ Check the resistance of H.V. transformer	Yes → Resistance of H.V. transformer is higher or lower than the standard	→ Replace H.V. transformer
No ↓ Check continuity of M/W RELAY	Yes → No continuity	→ Replace Control Assembly

### 2. Check points after repair

- After repair or replacement of parts, operate the oven in Microwave mode.
- Operate M/W mode using a cup of water about 300ml and check the water grow warm.
- You need to reconfirm the above guidances in trouble again.

**TROUBLE3) Although display shows, oven cooking is not operated**  
**(Including operating problems of start button)**

**1. Check points**

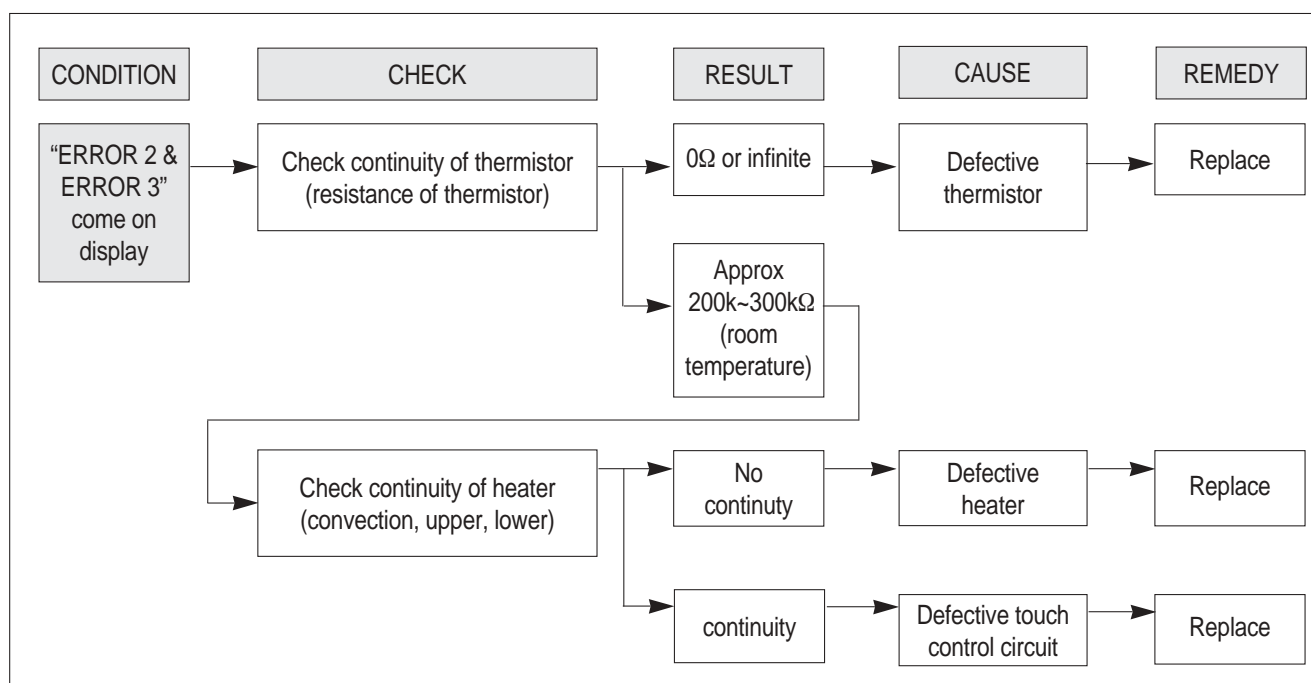


**2. Check points after repair**

- After repair or replacement of parts, operate the oven in convection 200°C during 10 minutes
- Check the cavity grow warm
- You need to reconfirm the above guidances in trouble again.

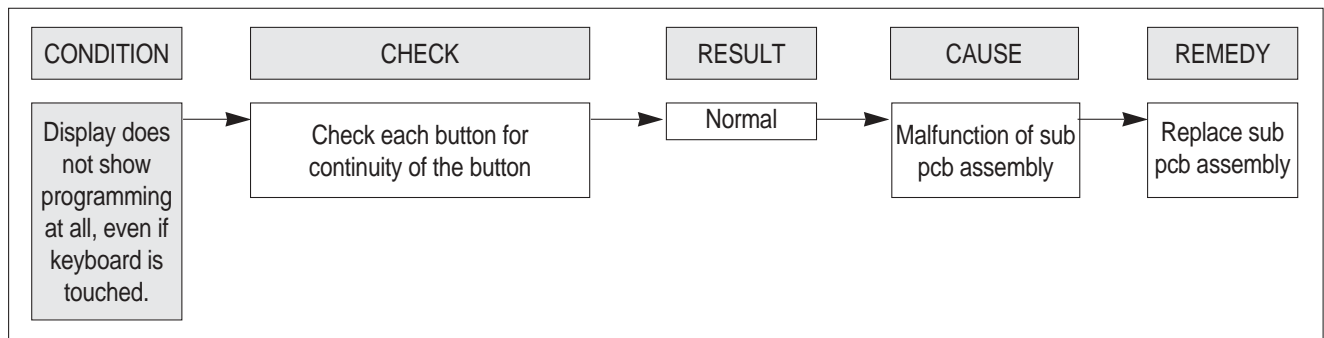
#### Trouble4) When "ERROR2" or "ERROR3" come on display

DISPLAY	When does happen these ERRORS ?
Err3	Error3 happen that the temperature sensor (thermister) dosen't connect to P.C.B connector
Err2	Error2 happens if the temperature of cavity is very high After the oven is cooled enough, operate again If Display show "Err2" again, following the below procedure



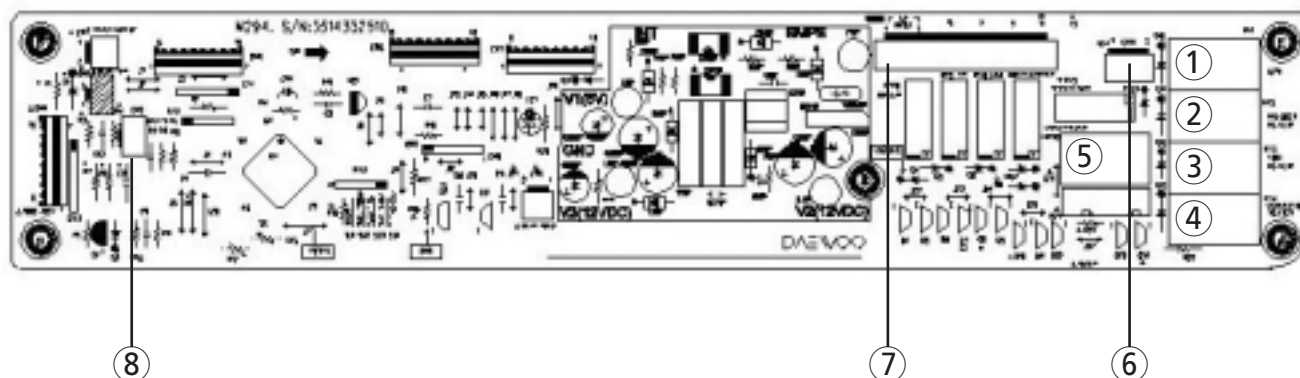
**TROUBLE 5) The following visual conditions indicate a probable defective touch control Circuit or button P.C.B. assembly**

1. Incomplete segments.
  - 1) segment missing
  - 2) partial segments missing
  - 3) digit flickering other than normal fluorescent slight flickering
2. A distinct change in the brightness of one or more numbers exists in the display
3. One or more digits in the display are not on when they should be.
4. Display does not count down or up with time cooking or clock operation.
5. Oven is programmable and cooks normally but no display shows.
6. Display obviously jumps in time while counting down.
7. Display counts down noticeably too fast while cooking.
8. Display does not show the time of day when clear button is touched.
9. Oven lamp and turn table motor do not stop although cooking is finished.



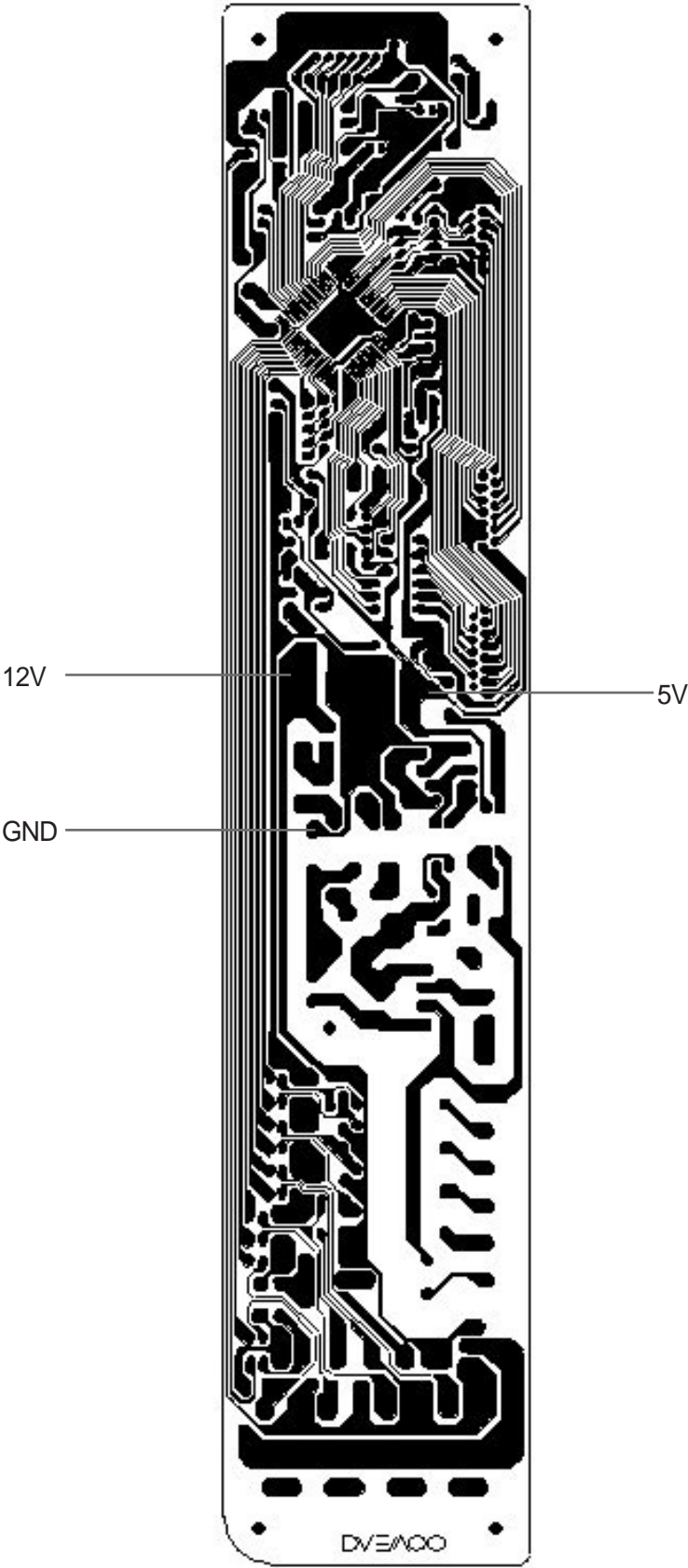
## 14. PRINTED CIRCUIT BOARD

MAIN PCB



LOCATION	PART NAME	FUNCTION
1	MW R ELAY	Control M/W
2	HALOGEN HEATER RELAY	Control halogen heater (side heater)
3	TOP HEATER RELAY	Control top heater
4	CONVECTION RELAY	Control back heater
5	SLOW ACTING RELAY	Prevent the transient current (while)operating M/W
6	DOM	Let a micon decide Open and close of door
7	SUB R ELAY	NO. 1 & 3 : Supply power to PCB NO. 5 : Convection motor NO. 7 : Blower-Motor NO. 9 : Lamp
8	THERMISTER	Temperature sensor

PCB PATTERN DIAGRAM





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# ABOUT THIS MANUAL

VISION CREATIVE, INC.

서울 종로구 통의동  
6번지 이룸빌딩 4층

담	당	이태희 님		
F.MODEL		KOC-1C0K5SC2	B.MODEL	KOC-1C0KB
		KOC-1C0K5SC3		KOC-1C0KBS
		KOC-1C4K5SC1		KOC-1C4KB
접	수	2010.02.22 총 39페이지		
일	정	1 차		
		2차		
		3차		
제	판	한	인	쇄
규	격	Service Manual		
MEMO 총 39p				
10.02.22-전체신규 39p				
10.02.23-11p, 15p, 20p, 22p, 24p, 25p, 26p, 27p, 28p, 29p 수정 _				
신규 10p				

연락처

VISION 담당 방 문 수

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